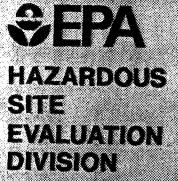
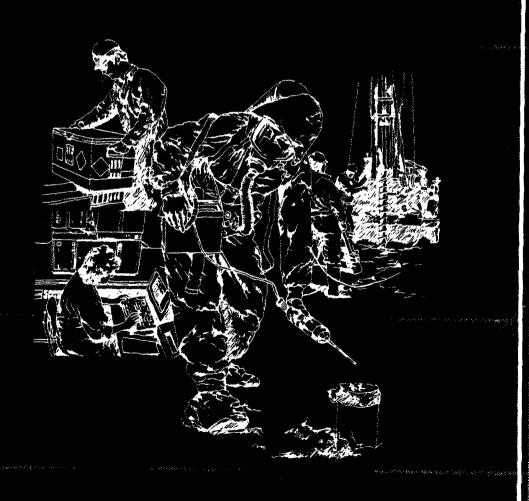
PR/VSI FINAL REPORT
for
DURAWOOD TREATING COMPANY
PINEVILLE, LOUISIANA
TDD F-06-8709-34
(LAD069524981)
November 11, 1988



Field Investigation Team Zone II



CONTRACT NO. 68-01-7347

ecology and environment, inc.

International Specialists in the Environment



PR/VSI FINAL REPORT for DURAWOOD TREATING COMPANY PINEVILLE, LOUISIANA TDD F-06-8709-34 (LAD069524981) November 11, 1988

> K.H. Malone, Jr., FIT Office Manager Ecology and Environment, Inc.

Tim Hall, Assistant FIT Office Manager ICF Technology, Inc.

Ravinder Joseph, Environmental Engineer ICF Technology, Inc.

Gen L Gon for Keils Miss Keith Dias, Geologist ICF Technology, Inc.

This report was prepared for the U.S. Environmental Protection Agency, Region VI (EPA) by Ecology and Environment, Inc. in fulfillment of Contract No. 68-01-7347, Technical Directive Document No. F06-8709-31. The opinions, findings and conclusions expressed herein are those of the contractor and not necessarily those of the EPA or other cooperating agencies. Hention of company or product names is not to be considered an endorsement by the EPA or the contractor.

This document is intended to assist EPA and State personnel in exercising the discretion conferred by regulation in developing requirements for an owner/operator to conduct the RCRA Facility Investigation (RFI) pursuant to 40 CFR 264. EPA will not necessarily limit RFI or other requirements to those that correspond with the recommendations set forth herein. EPA and State personnel must exercise their technical judgement in using the RCRA Facility Assessment report as well as other relevant information in determining which RFI or other requirements to include in a permit or an order.

TABLE OF CONTENTS

Section			Page
1	INTR	ODUCTION	1-1
	1.1 1.2		1-1 1-1
2	SITE	DESCRIPTION	2–1
	2.3 2.4	SITE LOCATION SITE HISTORY CURRENT OPERATIONS IDENTIFICATION OF SOLID WASTE MANAGEMENT UNITS SUMMARY OF WASTES	2-1 2-1 2-1 2-3 2-7
3	ENVI	RONMENTAL SETTING	3–1
	3.1	METEOROLOGY Climate Temperature Precipitation Humidity and Evaporation Wind Air Quality	3-1 3-1 3-1 3-1 3-2 3-1
	3.1	PHYSIOGRAPHY Topography Soil	3-2 3-2 3-2 3-2
	3.3	Geology HYDROLOGY Surface Water Ground Water	3-2 3-3 3-3 3-9
	3.4		3-9 3-9 3-9 3-12
	3.5		3-12 3-12 3-12

so so	LID VASTE MANAGEMENT UNITS	4-1
4.	1 SVMU 1 CHATLIN LAKE CANAL IMPOUNDMENT (25)	4-1
	Description	4-1
	History	4-1
	Vastes	4-1
	Documented Release	4-2
	Potential Release	4-2
	Soil/Ground Water	4-2
	Surface Water	4-2
	Air/Subsurface Gas	4-2
4.	2 SWMU 2 VACUUM PUMP COOLING POND (20)	4-3
	Description	4-3
	History	4-3
	Vastes	4-3
	Documented Release	4-3
	Potential Release	4-4
	Soil/Ground Water	4_4
	Surface Water	4-4
	Air/Subsurface Gas	4-4
4.	3 SWMU 3 TEMPORARY TREATED WOOD STORAGE AREA (W)	4-4
	Description	4-4
	History	4_4
	Vastes	4-4
	Documented Release	4-5
	Potential Release	4-5
	Soil/Ground Water	4-5
	Surface Vater	4-5
	Air/Subsurface Gas	4-5
4.	4 SWMU 4 PRIMARY OIL/WASTE WATER SEPARATOR (I)	4-5
	Description	4-5
	History	4-6
	Vastes	4-6
	Documented Release	4-6
	Potential Release	4-6
	Soil/Ground Water	4-6
	Surface Water	4-6
	Air/Subsurface Gas	4-6
4.	5 SWMU 5, 6, 7 CONCRETE SUMPS AT FRONT OF TREATMENT CYLINDERS F AND G	4-6
	Description	4-6
	History	4-7
	Vastes	4-7
	Documented Release	4-7
	Potential Release	4-7
	Soil/Ground Water	4-7
	Surface Vater	4-7
	Air/Subsurface Gas	4-7

History 4-8 Vastes 4-8 Documented Release 4-8 Fotential Release 4-8 Soil/Ground Water 4-8 Surface Water 4-8 Air/Subsurface Gas 4-8 Air/Subsurface Gas 4-8 Air/Subsurface Gas 4-8 Air/Subsurface Gas 4-9 Description 4-8 Description 4-8 Air/Subsurface Gas 4-9 Documented Release 4-9 Documented Release 4-9 Fotential Release 4-9 Surface Water 4-9 Air/Subsurface Gas 4-10 Air/Subsurface Gas 4-11 Air/Subsurface Gas 4-12 Air/Subsurface Gas 4-12 Air/Subsurface Gas 4-13 Air/Subsurface Gas 4-14 Air/Subsurface Gas 4-15 Air/Subsurface Gas 4-15 Air/Subsurface Gas 4-16 Air/Subsurface Gas 4-17 Air/Subsurface Gas 4-18 Air/Subsurface Gas 4-19 Air/Subsurface Gas 4-10 Air/Subsurface Gas 4-11 Air/Subsurface Gas 4-12 Air/Subsurface G	4.6		4-7
Vastes A=8 Documented Release A=8 Soil/Ground Vater A=8 Soil/Ground Vater A=8 Soil/Ground Vater A=8 Air/Subsurface Gas A=8 Air/Subsurface Gas A=8 A=8 Air/Subsurface Gas A=8 A=8 Air/Subsurface Gas A=8 A=8 Air/Subsurface Gas A=9 Description A=8 A=8 A=9 Documented Release A=9 Documented Release A=9 Fotential Release A=9 Soil/Ground Vater Air/Subsurface Gas A=9 Air/Subsurface Gas A=9 Air/Subsurface Gas A=9 Air/Subsurface Gas A=9 Air/Subsurface Gas A=10		Description	4-7
Documented Release 4-8			
Potential Release 4-8 Soil/Ground Water 4-8 Surface Water 4-8 Air/Subsurface Gas 4-9 Air/Subsurface Gas 4-10 Air/Subsurface Gas 4-11 Air/Subsurface Gas 4-12 Air/Subsurface Gas 4			
Soil/Ground Water Surface Vater A-8			
Surface Water			
Air/Subsurface Gas 4-8 SYMU 11, 12, 13 DROP DOWN TANKS (V) 4-8 Description 4-8 History Wastes 4-9 Documented Release Potential Release Soil/Ground Water Surface Water Air/Subsurface Gas 4-9 SWMU 14 MAIN SEPARATOR SUMP (J) Description History Wastes Documented Release Potential Release Potential Release Fotential Release Soil/Ground Water Surface Water Air/Subsurface Gas 4-10 Soil/Ground Water Surface Water Air/Subsurface Gas 4-10 Description History Wastes Documented Release Soil/Ground Water Surface Water Air/Subsurface Gas 4-10 Description History Wastes Documented Release Potential Release Potential Release Fotential Release A-10 Description History Wastes Documented Release A-11 Soil/Ground Water Surface Water Air/Subsurface Gas 4-11 Soil/Ground Water Surface Water Air/Subsurface Gas 4-11 SUMU 16 ABOVE-GROUND RAILROAD CAR SEPARATOR (K) A-11 Description History Wastes Documented Release A-11 SUMU 16 ABOVE-GROUND RAILROAD CAR SEPARATOR (K) A-11 Description History Wastes Documented Release A-11 SUMU 16 ABOVE-GROUND RAILROAD CAR SEPARATOR (K) A-11 Description History Wastes Documented Release A-12 Soil/Ground Water Surface Water A-12 Soil/Ground Water Surface Water A-12 Soil/Ground Water Surface Water			
4.7 SWMU 11, 12, 13 DROP DOWN TANKS (V) Description History Vastes Documented Release Potential Release Soil/Ground Water Air/Subsurface Gas 4.8 SWMU 14 MAIN SEPARATOR SUMP (J) Description History Vastes Documented Release Potential Release Potential Release Potential Release Potential Release Fotential Release Soil/Ground Water Air/Subsurface Gas 4.10 Description History Vastes Documented Release Potential Release Soil/Ground Water Surface Water Air/Subsurface Gas 4.10 Description History Vastes Documented Release Potential Release Potential Release A-10 Description History Vastes Documented Release A-10 SUMU 16 ABOVE-GROUND RAILROAD CAR SEPARATOR (K) Description History Vastes Documented Release A-11 SUMU 16 ABOVE-GROUND RAILROAD CAR SEPARATOR (K) Description History Vastes Documented Release A-11 Description History Vastes Documented Release A-12 Soil/Ground Water Surface Vater A-17 A-18 A-19 A-19 A-19 A-10 A-10 A-10 A-10 A-10 A-10 A-11 A-10 A-11 A-11			
Description	4.7		
History 4-9	7.,		
Vastes			
Documented Release 4-9			
Potential Release 4-9			
Soil/Ground Vater 4-9 Surface Vater 4-9 Air/Subsurface Gas 4-9 4.8			
Surface Water Air/Subsurface Gas 4-9			
4.8 SWMU 14 MAIN SEPARATOR SUMP (J) Description Eistory Vastes Documented Release Potential Release Soil/Ground Water Air/Subsurface Gas 4.9 SWMU 15 SUMP INSIDE TREATMENT BUILDING (R) Description History Vastes Documented Release Potential Release Soil/Ground Water Surface Water Air/Subsurface Gas 4-10 Description History Vastes Documented Release 4-11 Surface Water Air/Subsurface Gas 4-11 Surface Water Air/Subsurface Gas 4-11 Description History Vastes 4-11 Surface Water Air/Subsurface Gas 4-11 Potential Release 4-11 Description History Vastes 4-11 Description Fistory Vastes 4-11 Documented Release 4-11 Potential Release 4-11 Surface Water 4-12 Soil/Ground Water Soil/Ground Water Soil/Ground Water Soil/Ground Water Surface Water 4-12		Surface Water	
Description 4-9		Air/Subsurface Gas	4-9
## ## ## ## ## ## ## ## ## ## ## ## ##	4.8	SVMU 14 MAIN SEPARATOR SUMP (J)	4-9
Vastes		Description	4-9
Documented Release 4-10 Potential Release 4-10 Soil/Ground Water 4-10 Air/Subsurface Gas 4-10 Air/Subsurface Gas 4-10 Description 4-10 History 4-10 Wastes 4-11 Potential Release 4-11 Surface Water 4-11 Surface Water 4-11 Surface Water 4-11 Air/Subsurface Gas 4-11 Potential Release 4-11 Surface Water 4-11 Air/Subsurface Gas 4-11 Description 4-11 History 4-11 Description 4-11 History 4-11 Wastes 4-11 Soil/Ground Water 4-11 Surface Water 4-11 Surface Water 4-11 Figure Water 4-11 Surface Water 4-11 Surface Water 4-11 Vastes 4-11 Surface Water 4-12 Soil/Ground Water 4-12 Soil/Ground Water 4-12 Surface Water 4-12		Eistory	4-10
Potential Release		Vastes	
Soil/Ground Water			
Surface Vater Air/Subsurface Gas 4.9 SVMU 15 SUMP INSIDE TREATMENT BUILDING (R) Description History Vastes Documented Release Potential Release Soil/Ground Vater Air/Subsurface Gas 4.10 SVMU 16 ABOVE-GROUND RAILROAD CAR SEPARATOR (K) Description History Vastes Documented Release 4-11 Surface Vater Air/Subsurface Gas 4-11 Description History Vastes Documented Release Potential Release Fotential Release Soil/Ground Vater Surface Vater 4-12 Surface Vater			
Air/Subsurface Gas 4.9 SWMU 15 SUMP INSIDE TREATMENT BUILDING (R) Description History Vastes Documented Release Potential Release Soil/Ground Water Air/Subsurface Gas 4-11 Air/Subsurface Gas 4-11 Description History Vastes Documented Release 4-11 SWMU 16 ABOVE-GROUND RAILROAD CAR SEPARATOR (K) Description History Vastes Documented Release Potential Release Soil/Ground Water Surface Water 4-12 Surface Water 4-12 Surface Water			
4.9 SWMU 15 SUMP INSIDE TREATMENT BUILDING (R) Description History Wastes Documented Release Potential Release Soil/Ground Water Air/Subsurface Gas 4.10 SWMU 16 ABOVE-GROUND RAILROAD CAR SEPARATOR (K) Description History Wastes Documented Release Potential Release Soil/Ground Water Surface Water 4-11 History Wastes Documented Release Potential Release Soil/Ground Water Surface Water 4-12 Surface Water			
Description History Wastes Documented Release Fotential Release Soil/Ground Water Air/Subsurface Gas 4-11 Air/Subsurface Gas 4-11 Description History Wastes Documented Release Fotential Release Soil/Ground Water 4-11 Wastes Fotential Release Soil/Ground Water Surface Water 4-12 Surface Water 4-13			
History Wastes Documented Release Potential Release Soil/Ground Water Surface Water Air/Subsurface Gas 4-11 Air/Subsurface Gas 4-11 Description History Wastes Documented Release Fotential Release Soil/Ground Water Surface Water 4-11 Fotential Release Soil/Ground Water Surface Water 4-12 Surface Water	4.9		
Wastes 4-10 Documented Release 4-11 Potential Release 4-11 Soil/Ground Water 4-11 Surface Water 4-11 Air/Subsurface Gas 4-11 4.10 SWMU 16 ABOVE-GROUND RAILROAD CAR SEPARATOR (K) 4-11 Description 4-11 History 4-11 Vastes 4-11 Documented Release 4-11 Potential Release 4-12 Soil/Ground Water 4-12 Surface Water 4-12			
Documented Release 4-11 Potential Release 4-11 Soil/Ground Water 4-11 Surface Water 4-11 Air/Subsurface Gas 4-11 4.10 SWMU 16 ABOVE-GROUND RAILROAD CAR SEPARATOR (K) 4-11 Description 4-11 History 4-11 Wastes 4-11 Documented Release 4-11 Potential Release 4-12 Soil/Ground Water 4-12 Surface Water 4-12			
Potential Release Soil/Ground Water Surface Water Air/Subsurface Gas 4-11 4-10 SWMU 16 ABOVE-GROUND RAILROAD CAR SEPARATOR (K) Description History Wastes Documented Release Potential Release Soil/Ground Water Surface Water 4-11 Surface Water 4-12 4-13 4-14 4-15 4-16 4-17			
Soil/Ground Water Surface Water Air/Subsurface Gas 4-11 4.10 SWMU 16 ABOVE-GROUND RAILROAD CAR SEPARATOR (K) Description History Wastes Documented Release Potential Release Soil/Ground Water Surface Water 4-11 Surface Water 4-12 4-13			
Surface Water			
Air/Subsurface Gas 4-11 4.10 SWMU 16 ABOVE-GROUND RAILROAD CAR SEPARATOR (K) 4-11 Description History Vastes Documented Release Potential Release Soil/Ground Water Surface Water 4-12 4-13			
4.10 SWMU 16 ABOVE-GROUND RAILROAD CAR SEPARATOR (K) Description History Vastes Documented Release Fotential Release Soil/Ground Water Surface Water 4-11 4-12 4-12 4-12			
Description 4-11 History 4-11 Wastes 4-11 Documented Release 4-11 Potential Release 4-12 Soil/Ground Water 4-12 Surface Water 4-12	۸ 10		
History 4-11 Vastes 4-11 Documented Release 4-11 Potential Release 4-12 Soil/Ground Vater 4-12 Surface Vater 4-12			
Vastes4-11Documented Release4-11Potential Release4-12Soil/Ground Water4-12Surface Water4-12			
Documented Release 4-11 Potential Release 4-12 Soil/Ground Water 4-12 Surface Water 4-12			
Potential Release 4-12 Soil/Ground Water 4-12 Surface Water 4-12			
Soil/Ground Water 4-12 Surface Water 4-12			
Surface Water 4-12			
		Air/Subsurface Gas	4-12

	4.11	SWMU 17 FLOC TANK AND SUMP (L AND M)	4-12
	7744	Description (2 into in)	4-12
		Eistory	4-12
		Vastes	4-12
		Documented Release	4-12
		Potential Release	4-13
		Soil/Ground Water	4-13
		Surface Vater	4-13
		Air/Subsurface Gas	4-13
	4 12	SWMU 18 WASTE WATER OUTFALL OIL SEPARATOR SUMP (S)	4-13
	7.16	Description (b)	4-13
		History	4-13
		Vastes	4-13
		Documented Release	4-14
		Potential Release	4-14
		Soil/Ground Water	4-14
		Surface Vater	4-14
		Air/Subsurface Gas	4-14
	4.13	SWMU 19 TREATED WOOD DRYING PAD (3)	4-14
	7123	Description (5)	4-14
		History	4-14
		Vastes	4-15
		Documented Release	4-15
		Potential Release	4-15
		Soil/Ground Water	4-15
		Surface Water	4-15
		Air/Subsurface Gas	4-15
5	RELE	ASE PATHVAYS AND HECHANISHS	5–1
	5.1	AIR	5-1
		Pathways	5-1
		Mechanisms	5-1
		Compliance with Regulations	5-1
	5.2		5-1
		Pathways	5-1
		Mechanisms	5-2
	5.3	SURFACE VATER	5-2
		Pathways	5-2
		Mechanisms	5-2
	5.4	GROUND WATER	5-3
		Pathways	5-3
		Mechanisms	5-3
		Remedial Work	5-3

5	AREA	AS OF CONCERN	6-1
	6.2 6.3	ABOVE-GROUND STORAGE TANKS (O, P AND Q) UNDERGROUND RAILROAD CAR (OIL/WASTE WATER SEPARATOR) INSTALLATION OF A THIRD TREATMENT CYLINDER (H) TRUCK UNLOADING PAD (N)	6-1 6-1 6-2
7	CONC	ELUSIONS	7-1
	7.1	SWMU 1 CHATLIN LAKE CANAL IMPOUNDMENT (25) Conclusion Recommendation	7-1 7-1 7-1
	7.2	SWMU 2 VACUUM PUMP COOLING POND (20) Conclusion Recommendation	7-1 7-1 7-1 7-1
	7.3	SWMU 3 TEMPORARY TREATED WOOD STORAGE AREA (W) Conclusion	7-2 7-2
	7.4	Recommendation SWMU 4 PRIMARY OIL/WASTE WATER SEPARATOR (I) Conclusion	7-2 7-2 7-2
	7.5		7-2 7-2
	7.6	Conclusion Recommendation SWMU 8, 9, 10 CONDENSERS (T)	7-2 7-2 7-3
	7.7	Conclusion Recommendation SWMU 11, 12, 13 DROP DOWN TANKS (V)	7-3 7-3 7-3
	7.8	Conclusion Recommendation SWMU 14 MAIN SEPARATOR SUMP (J)	7-3 7-3 7-3
	7.9	Conclusion Recommendation SWMU 15 SUMP INSIDE TREATMENT BUILDING (R)	7-3 7-3 7-3
		Conclusion Recommendation SWMU 16 ABOVE-GROUND RAILROAD CAR SEPARATOR (K)	7-3 7-4 7-4
		Conclusion Recommendation	7-4 7-4
	7.11	SVMU 17 FLOC TANK AND SUMP (L AND M) Conclusion Recommedation	7-4 7-4 7-4

	7.12	SVMU 18 WASTE WATER OUTFALL OIL SEPARATOR SUMP (S) Conclusion	7-4 7-4
		Recommendation	7-4
	7 13	SVMU 19 TREATED WOOD DRYING PAD (3)	7-5
	,.13	Conclusion	7-5
		Recommendation	7-5
	7.14	AOC 1 ABOVE-GROUND STORAGE TANKS (O, P AND Q)	7-5
		Conclusion	7-5
		Recommendation	7-5
	7.15	AOC 2 UNDERGROUND RAILRAOD CAR	
		(OIL/WASTE WATER SEPARATOR)	7-5
		Conclusion	7-5
		Recommendation	7-5
	7 16		7-5
	7.10	AOC 3 INSTALLATION OF A THIRD TREATMENT CYLINDER (H)	
		Conclusion	7-5
		Recommendation	7-6
	7.17	AOC 4 TRUCK UNLOADING PAD (N)	7-6
		Conclusion	7-6
		Recommendation	7-6
8	REFE	RENCES	8-1

LIST OF FIGURES

FIGURE	TITLE	PAG
2-1	Site Location Hap	2-2
2-2	Plant Layout	2-4
2-3	Waste Stream Flow Chart	2-5
3–1	Lines of Geologic Cross-Section	3-4
3-2	Geologic Cross-Section A-A'	3-5
3-3	Geologic Cross-Section B-B'	3-6
3–4	Geologic Cross-Section C-C'	3–7
3–5	Surface Water Run-Off	3–8
3-6	Water Level Contours Lines in the "A" Wells 9/19/85	3-10
3-7	Ground Water Contours 6/12/86	3-11

LIST OF TABLES

TABLE	TITLE	PAGE
2-1	Solid Waste Hanagements Units	2-6
2-2	Principal Constituents of High-Temperature Creosote	2-8

APPENDICES

VSI Photographic Log	Appendix A	Ą
Record of Communication	Appendix I	3
Selected References	Appendix (3
Surface Soil Sample Locations and Sampling Results	C-1	
Soil Boring Locations and Sampling Results	C-7	
Soil Boring Logs	C-11	
Monitoring Well Logs and Locations	C-25	
Monitoring Well Sampling Results	C-48	
Summary of Monitoring Well Sampling Analysis	C-75	
Vacto Vator Discharge Campling Posults	C 76	

1. INTRODUCTION

Ecology and Environment, Inc. (E & E) Region VI Field Investigation Team (FIT) was tasked by the U.S. Environmental Protection Agency (EPA) under Contract Number 68-01-7347 to conduct RCRA Facility Assessment at the Durawood Treating Company (LAD069524981) in Pineville, Louisiana. The investigation was conducted to satisfy the requirements of Technical Directive Document (TDD) F-06-8709-34.

1.1 PURPOSE AND SCOPE

The 1984 Hazardous Solid Waste Amendments (HSWA) give the EPA new authority to require comprehensive corrective actions of Solid Waste Management Units (SWMUs) and other areas of concern at Interim Status Hazardous Waste Management Facilities. The HSWA applies specifically to facilities applying for RCRA permits. Corrective actions are intended to address the generation of subsurface gas and unregulated releases of hazardous constituents to air, surface water, soil and ground water.

A major segment of this program consists of RCRA Facility Assessments (RFA) to identify releases or potential releases requiring further investigation. According to EPA's RCRA Facility Assessment Guidance Document, the four-fold purpose of the RFA is to:

- o obtain data about releases at RCRA regulated facilities
- o evaluate SWMUs and other areas of concern for releases to all media; evaluate regulated units for releases other than ground water
- o determine releases of concern and the need for further actions and interim measures at the facility
- o screen from further investigations those SWMUs which do not pose a threat to human health and the environment

The three basic steps of the RFA consist of a Preliminary review (PR) of available information, a Visual Site Inspection (VSI) to obtain additional information on releases, and, if necessary, a Sampling Visit (SV) to fill data gaps by obtaining field and analytical data.

1.2 CONTENTS OF THE REPORT

This report presents the results of the PR and the VSI of Durawood Treating Company in Alexandria, Louisiana. Information for the PR was obtained from RCRA inspection reports. Notice of Violations (NOVs) issued by the Louisiana Department of Environmental Quality (LDEQ) and the Post-Closure Permit Application submitted by the company. These documents were obtained from file searches at the offices of the EPA

Region VI in Dallas, Texas and from LDEQ in Baton Rouge, Louisiana. The VSI was conducted on April 6, 1988. Durawood Treating Company was represented by Mr. Clyde Norton, Vice President; Mr. Jim Johnson, Plant Manager; and Mr. Roy White, Treating Plant Supervisor. Ecology and Environment, Inc. was represented by Mr. Imre Sekelyhidi. ICF Technology, Inc. was represented by Mr. Ravinder Joseph and Mr. Keith Dias.

Section 2 describes the Durawood facility and its historical and current operations. Individual SVMUs are identified and wastes managed by the facility are summarized. Section 3 reviews the facility's environmental setting, comprising meteorology, physiography, hydrogeology, resource utilization and receptors. Section 4 describes each SVMU and the associated release potential. Section 5 assesses release pathways and describes the potential for release to air, soil, surface water and ground water. Section 6 summarizes areas of concern and targets areas in which further information is needed. Section 7 summarizes the findings of the report. Section 8 lists references utilized in this report. The VSI photographic log, records of communication and selected references provide additional information and are presented as Appendices A, B and C.

2. SITE DESCRIPTION

2.1 SITE LOCATION

Durawood Treating Company is located at 1 Koppers Street, Pineville, Rapides Parish, Louisiana. It is situated at latitude 32° 17′ 12" north and longitude 92° 25′ 57" west (Figure 2-1) in Township 4 North, Range 1 West, Sections 3 and 54, Southwest district, Rapides Parish, Louisiana. The facility covers approximately 83 acres.

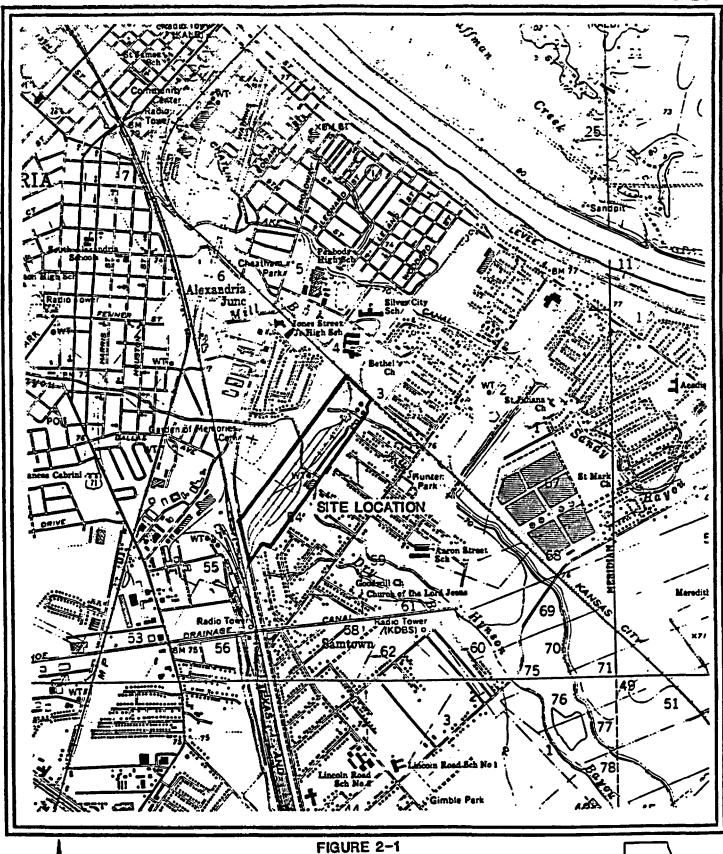
2.2 SITE HISTORY

The original plant and mill were constructed by American Lumber and Treating Company in 1926. Koppers Company, Inc. acquired the plant in approximately 1944 and sold it to Roy O. Martin Lumber Company, the May 5, current owner, on 1970. Koppers used creosote pentachlorophenol as preservatives to treat lumber (Reference 14). Now the only activity at the facility is the treatment of railroad crossties using creosote and fuel oil mixture. The Standard Industrial Code (SIC) for the site is 2491. There were two RCRA regulated surface impoundments on-site for creosote contaminated water. These were closed on April 15, 1986 (Reference 14). Clean closure was not achieved because soil and ground water creosote parameters did not meet drinking water standards.

2.3 CURRENT OPERATIONS

The plant receives railroad crossties by rail for treatment with creosote and fuel oil mixture. Creosote and fuel oil are received by both road and rail. The untreated wood is usually prepared for treatment by cutting it to the right size and incising it to facilitate preservative penetration. Wood may also be bored and shaped prior to treatment. The wood is loaded onto tram cars and pushed into the treatment cylinders. The treatment varies depending upon the moisture content of the wood.

For dry wood, after the charge of material is placed in the cylinder and the system made air-tight, an air pressure of 65 psi is applied to the system, filling the wood cells with compressed air. Creosote at 200 °F is then forced into the treatment cylinder while the same air pressure is maintained. When the treatment cylinder is filled with preservative, additional pressure is applied by a pump to the system until a final pressure between 150 to 200 psi is reached. Steam heating coils help maintain the temperature at approximately 200 °F in the treatment After the desired preservative penetration is reached in 5 to 6 hours, the air pressure is released through a drum which serves as a muffler. The creosote is returned to the tanks. A vacuum of approximately 26 inches of mercury is applied for approximately 1 to 3 hours to help remove excess creosote from the wood. A drip-pump returns creosote from the bottom of the cylinders to the tanks. For green (raw) wood, the treatment cylinder is half filled with creosote at 190 °F. A vacuum of approximately 24 to 26 inches of mercury is applied for a



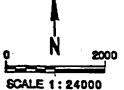


FIGURE 2-1
Site Location Map
DURAWOOD TREATING COMPANY
ALEXANDRIA, LA
TDD NO. F-6-8709-32
CERCLIS NO. LAD069524981



period of approximately 24 hours. When the moisture content drops to 45%, the method used for dry wood is repeated.

A steam jet ejector, which replaced the vacuum pump in 1985, is used at the facility to apply the vacuum. The steam/creosote vapors enter a condensate from the treatment cylinder and the condensate enters a drop down tank. There is one condenser for each cylinder and one drop down tank for each condenser. From the drop down tank, the condensate is pumped to the separator (old treatment cylinder) located inside the treatment building. Water (non-contact) used to cool the vapors in the condensers enters a spray cooling pond (Photograph 20). This approximately 30 feet by 50 feet non-contact cooling pond is between 6 to 9 feet deep. It is located southeast of the treatment building.

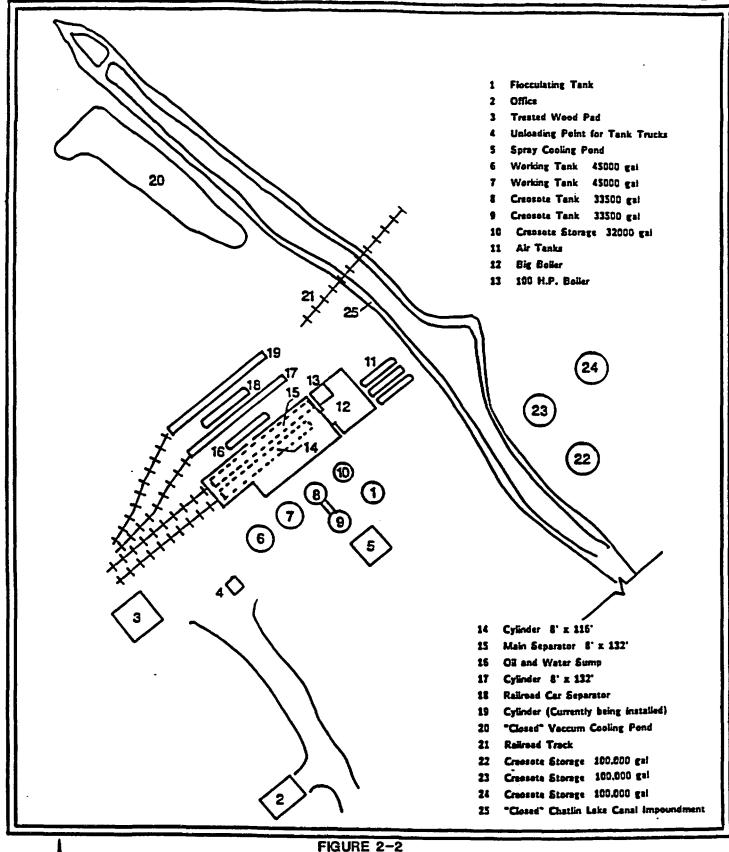
The facility uses a 30/70 creosote/petroleum oil mixture. In some cases, 100% creosote is used to treat the wood. The annual consumption is approximately 468,000 gallons of creosote and 1,920,000 gallons of petroleum oil. No creosote contaminated waste is shipped off-site because all materials are recycled in the process.

2.4 IDENTIFICATION OF SOLID WASTE HANAGEMENT UNITS

The plant layout is shown on Figure 2-2 and the waste stream flow chart on Figure 2-3. Unit locations shown on Figure 2-2 are indicated by numerals 1 through 25; those shown on Figure 2-3, by letters A through V.

Nineteen Solid Waste Managements Units (SWMUs) have been identified (Table 2-1) in this report. One of the treatment units (underground railroad car oil/waste water separator) identified in the PR was never present at the site, but was mentioned in the RCRA inspection report of March 15, 1984 (Reference 16). Another unit removed from the SWMUs is the truck unloading area because insufficient evidence was found for its classification as a SWMU. These units are included among the areas of concern (AOC) as AOC 2 and AOC 4. Also included are the areas around the old tank farm which had creosote-like material spills observed during previous RCRA site inspections and installation of a third treatment cylinder as AOC 1 and AOC 3.

The creosote-water vapors from the treatment cylinders enter the condensers (SVMUS 8, 9 and 10). The condensates enter the drop down tanks (SVMUS 11, 12 and 13), then are pumped to the primary oil/waste water separator located inside the treatment building (SVMU 4). This separator was formerly used as a treatment cylinder. From this unit the oil fraction enters the main separator sump (SVMU 14) outside the treatment building. The waste water fraction enters a floc tank and sump (SVMU 17) and the waste water outfall oil separator sump (SVMU 18) prior to discharge into the City of Alexandria sewage system. The oil fraction from SVMU 18 is pumped back to the work tanks. The above ground railroad car separator (SVMU 16) is also used in separating the oil and waste water fractions from the waste stream which comes from the main separator sump (SVMU 14). Concrete sumps at the front of the



PLANT LAYOUT
DURAWOOD TREATING COMPANY
ALEXANDRIA, LA

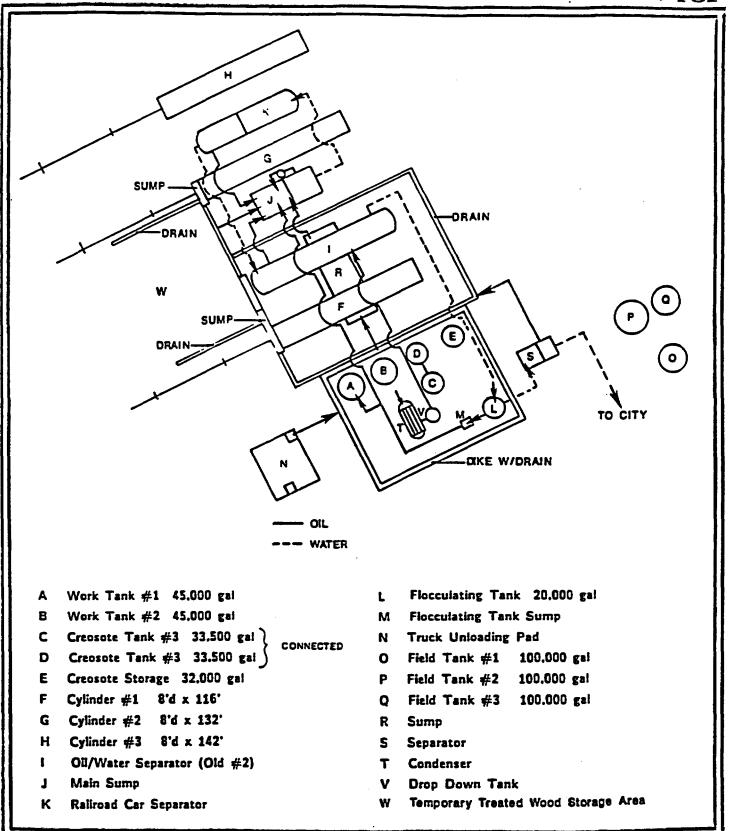


FIGURE 2-3
WASTE STREAM FLOW CHARTDURAWOOD TREATING COMPANY
ALEXANDRIA, LA

TABLE 2-1

SOLID WASTE MANAGEMENT UNITS

SVHU	Description	RCRA Regulated Unit	Status
1	Chatlin Lake Canal Impoundment (25)	Yes	Closed
2	Vacuum Pump Cooling Pond (20)	Yes	Closed
3	Temporary Treated Wood Storage Area (W)	No	Active
4	Primary Oil/Waste Water Separator (I)	No	Active
5, 6, 7	Concrete Sumps at Front of Treatment Cylinders F and G	No	Active
8, 9, 10	Condensers (T)	No	Active
11, 12, 13	Drop Down Tanks (V)	No	Active
14	Main Separator Sump (J)	No	Active
15	Sump Inside Treatment Building (R)	No	Active
16	Above-Ground Railroad Car Separator (K)	No	Active
17	Floc Tank and Sump (L and M)	No	Active
18	Waste Water Outfall Oil Separator Sump (S)	No	Active
19	Treated Wood Drying Pad (3)	No	Active

treatment cylinders (SWMUS 5, 6 and 7) collect the creosote drippings from the cylinders, which then flow by gravity to SWMU 14, the main separator sump. The sump inside the treatment building (SWMU 15) is also used as a collection point for creosote spills occurring in the work tank and treatment building areas.

Wood waiting to be treated is loaded onto tram cars and pushed into the treatment cylinders at the temporary treated wood storage area (SVMU 3), where the treated wood is left on the concrete pad for approximately 24 hours to drip. The 1982, 1984 and 1985 RCRA inspections noted drippings of creosote-like material in this area. Creosote delivery to Durawood is by rail and by road. A concrete pad (AOC 4) is used to unload creosote tank trucks. Treated wood is stored on a concrete drying pad (SVMU 19). Chatlin Lake Canal impoundment (SVMU 1) and the vacuum pump cooling pond (SVMU 2) were on-site surface impoundments which until April 1986 contained creosote. These impoundments have since been closed.

2.5 SUMMARY OF VASTES

Records (Reference 14) indicate that Koppers used both creosote and pentachlorophenol (penta) as preservatives. The current owner has been using only a mixture of creosote and fuel oil as preservative to treat railroad crossties. Bottom sediment sludge from the treatment of waste water from wood preserving processes that use creosote and/or penta has been listed as hazardous (KOO1) according to 40 CFR 261. According to these regulations, unused creosote is also listed as hazardous (UO51). Principal constituents of high temperature creosote are shown in Table 2-2.

PRINCIPAL CONSTITUENTS OF HIGH-TEMPERATURE CREOSOTE

TABLE 2-2

Compound	% by Weight	
Naphthalene	7–28	
Phenanthrene	9–14	
Acenaphthene	2-5	
Fluoranthene	2-5	
Fluorene	2–4	
Methylnaphthalenes	1-4	
Pyrene	2-3	
Carbazole	1.8-2.7	
Anthracene	1.2-1.8	
Diphenylene oxide	0.5-1.0	
9,10-Dihydroanthracene	0.1-0.3	

Source: Wood Deterioration and Its Prevention by Preservative Treatments, Darrel D. Nicholas, Syracuse University Press, 1973

3. ENVIRONMENTAL SETTING

This section of the PR/VSI report covers the site's background environment: meteorology, physiography, hydrology, resource utilization and receptor information.

3.1 **HETEOROLOGY**

The climate (precipitation, humidity and predominant wind direction and speed) and air quality in the general vicinity of Alexandria are discussed below.

Climate

The climate in Pineville is determined primarily by the prevailing air flow pattern. Cold, dry air moving southward alternates with warm, moist air moving northward. The climatic result of the transition between the two major flow directions is frequent and sometimes abrupt weather change.

Temperature

The temperature in the Alexandria area is fairly mild. The summer temperatures typically do not exceed 100 °F, while the winter temperatures generally stay above freezing. The average maximum temperature recorded in August is 92 °F; the average minimum temperature in January is 42 °F. Each year there are typically 70 days of 90-plus degree temperatures and 46 days of sub-32 degree temperatures (Reference 1).

Precipitation

The mean annual rainfall for the region is 58 to 67 inches. The monthly rainfall ranges from less than 3 inches to greater than 6 inches. The recorded highest mean rainfall was 6.41 inches for the month of May (Reference 1).

Humidity and Evaporation

The Alexandria area stays fairly humid throughout the year. The mean annual humidity is 66%. The average monthly maximum humidity is 86% and the average minimum is 54%. The annual lake evaporation is 48 inches (Reference 1).

Vind

Wind in the area is generally from a southerly direction, but it typically blows from an easterly direction in September and October. The wind speed in the area averages 10 miles per hour except during April, May and June when it exceeds 17 miles per hour (Reference 1).

Air Quality

The background air quality in the Alexandria Pineville area ranges from good to excellent (Reference 20). Air monitoring for hydrocarbons in 1987 at 20 locations revealed that the air quality was good (Reference 19). Since the prevailing wind in the area is from the south, and since there are no large industrialized areas south of the city, the air quality typically ranges from good to excellent during most of the year (Reference 20). Durawood was in compliance during the most recent inspection conducted by Mr. Kenneth Johnson of the LDEQ on May 6, 1987 (Reference 24).

3.2 PHYSIOGRAPHY

The physiography in the Alexandria Pineville area changes at the Red River. The Pineville side exhibits some relief whereas the Alexandria side is almost entirely contained in the floodplain of the Red River and is quite flat (Reference 25).

Topography

The topography at the facility has virtually no relief. Although the slope of the facility is imperceptible, the facility drains both toward the northeast and the south. The Red River is one mile from the site and the entire site is within the 100-year floodplain.

Soil

The area in the vicinity of the facility is underlain by the Moreland Series of soils. The soils range from clay to silty clay to silty clay-loam. The upper layers of soil are dark reddish-brown clay (Reference 25). The subsurface soils at the facility are mostly silt and clay. The dark reddish-brown clay varies in thickness from 5 to 10 feet (Reference 14). Below this is the primary water-bearing zone of red-brown silty clay approximately 12 feet thick (14). A red-to-blue stiff clay underlies this layer. A fine, laterally limited, sand lens is present under the tank farm area. These soils have 0 to 1 percent slopes and extremely low permeabilities (10 to 10 cm/sec) (References 14 and 25). The predominant soil type at the facility is the Moreland (Mn A) clay.

Geology

Three prominent sedimentary deposits have been identified in Rapides Parish, Louisiana: the Red River alluvial deposits, Upland Pleistocene deposits and Miocene sandstones. Of these three, the Upland Pleistocene Deposits are probably not present in the City of Alexandria.

The alluvial deposits of the Red River Valley consist of unconsolidated sand, gravel and clay. The sand and gravel are usually found at the bottom overlain by the clay. The alluvium ranges in thickness from 75 to 150 feet. In width, these deposits range from 3 to 20 miles and average approximately 8 miles. Well logs from monitoring wells indicate layers of red clay and silt to 20 feet and gray clay from 20 to 30 feet

below the surface.

The Miocene sands are divided into two formations: the Fleming and the Catahoula. The Catahoula consists of alternating sands and sandstones with lenticular clays and arenaceous sediments. The formation dips southward at a rate of 50 to 100 feet per mile. The sands of the Catahoula formation underlying the Alexandria area range in depth from 300 to 1200 feet below the surface (References 8 and 9).

Site specific geology is shown on Figures 3-1, 3-2, 3-3 and 3-4.

3.3 HYDROLOGY

Rapides Parish possesses abundant resources of both surface and ground water. In the City of Alexandria, all drinking water requirements are met with ground water.

Surface Vater

Surface drainage leaving the Durawood facility does so via two major pathways: the Hynson Bayou and the drainage pathways along the old Chatlin Lake Canal impoundment. However, a total of 5 drainages were identified on-site during the VSI (Figure 3-5).

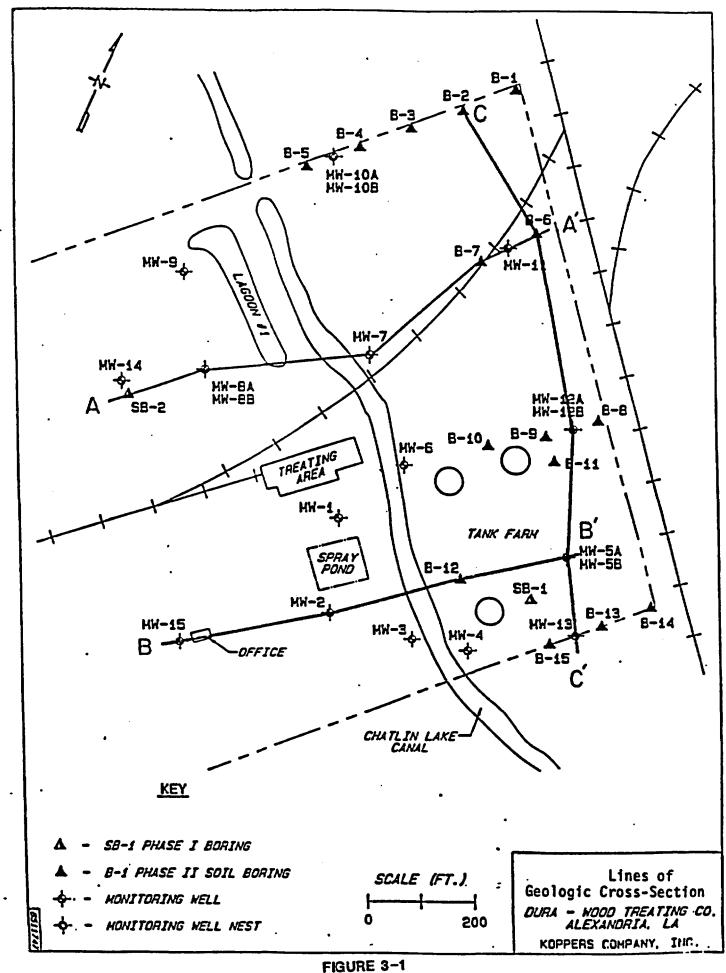
The first of the five drainage pathways is the Hynson Bayou. This bayou runs southwesterly close to the southern boundary of the facility (Photograph 14). It then swings gradually to the east and flows southeasterly for approximately 2 miles before running into Chatlin Lake Canal.

The second drainage pathway originates on the northwest side of the treatment building. It flows southwesterly under the mechanics shop and finally empties into Hynson Bayou (Photographs 10 and 11).

The third drainage pathway flows behind the concrete storage pads for treated wood. It flows in a southwesterly direction before entering Hynson Bayou on the east side of the bridge that crosses the bayou (Photographs 8 and 14).

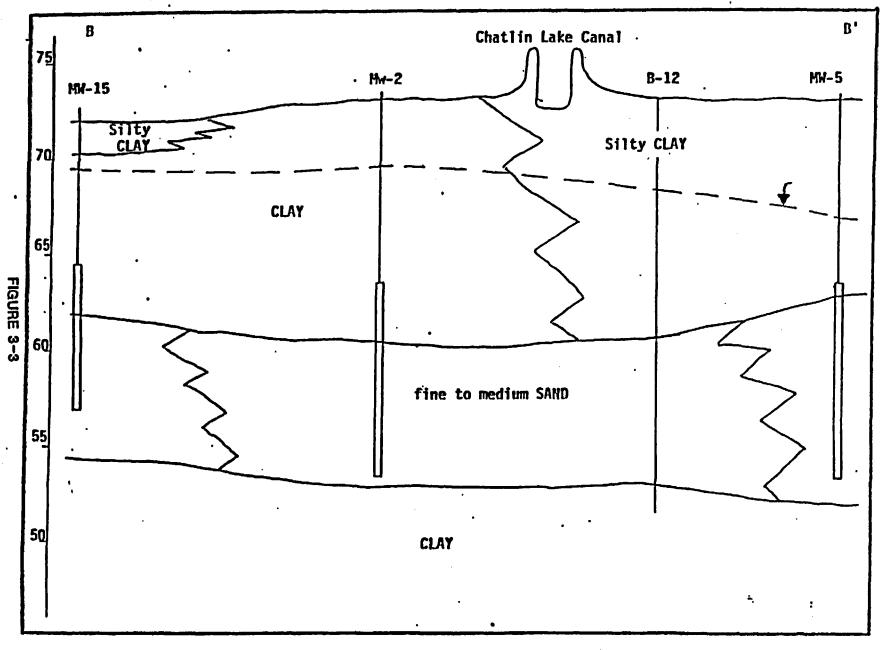
The fourth drainage pathway, also part of the Hynson Bayou system, enters the facility from the northwest. It flows in a southwesterly direction along the northwest boundary of the facility and ultimately enters Hynson Bayou. A portion of the drainage ditch running alongside the old Chatlin Lake Canal impoundment drains in a northwesterly direction (Photograph 13).

The Hynson Bayou system drains approximately 90% of the facility. The remaining 10% of the facility drains via the fifth drainage pathway that runs along both boundaries of the old Chatlin Lake Canal impoundment. These two drainages join before leaving the facility to the northeast and entering a drainage ditch that ultimately enters Chatlin Lake Canal approximately one mile downstream (Photographs 12, 21 and 22). The

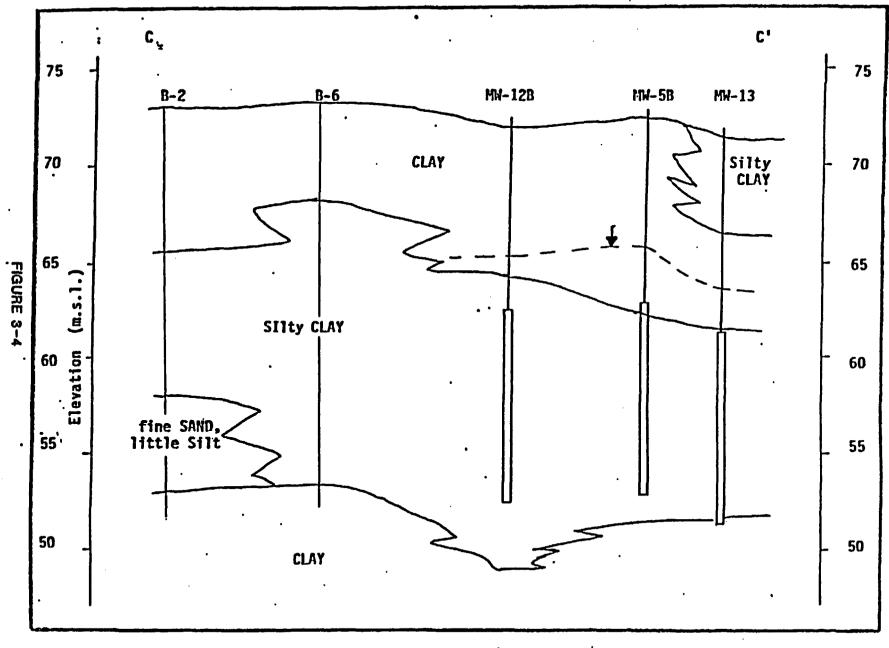


Geologic Cross - Section A - A'

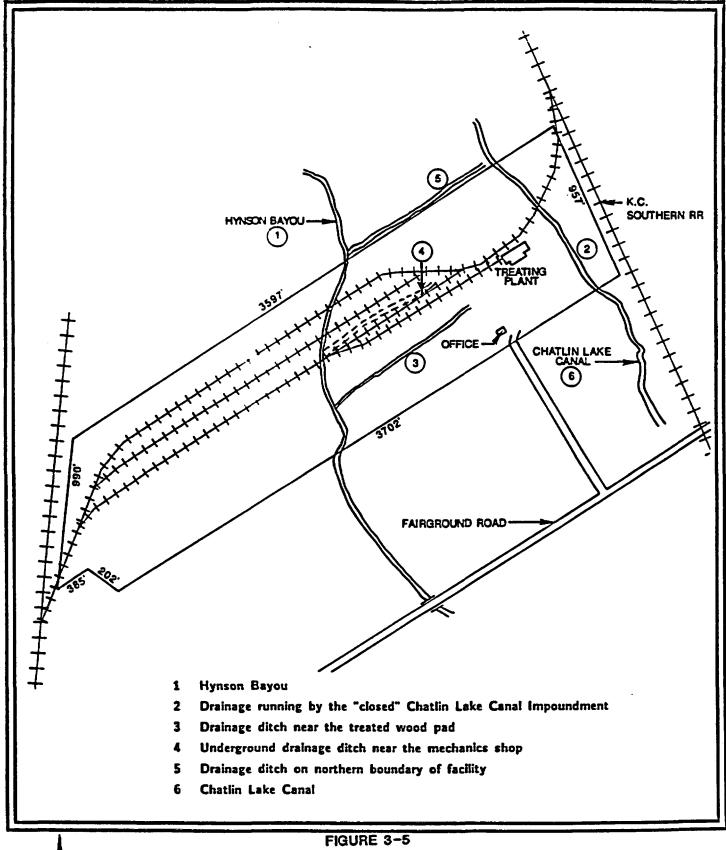
SOURCE: POST CLOSURE PERMIT APPLICATION FOR DURAWOOD TREATING COMPANY. APRIL 8,1988



Geologic Cross - Section B - B'



Geologic Cross - Section C - C'



SURFACE RUN OFF
DURAWOOD TREATING COMPANY
ALEXANDRIA, LA

Chatlin Lake Canal continues to flow in a southeasterly direction until it ultimately joins the Bayou Des Glaises diversion channel. The bayou is part of the Vermilion-Teche River Basin and apparently empties into the swamp associated with the basin.

Although the Red River runs very close to the site and to the Chatlin Lake Canal, the canal never enters the river (Reference 21). Instead, it flows southeasterly until it enters Bayou Des Glaises. There are no canals or navigation channels entering the Red River in or around Alexandria (Reference 21).

Ground Vater

Three important water bearing units have been identified in Rapides Parish: alluvial deposits of the Red River, Upland Pleistocene sediments and Miocene sandstones. The Miocene sands are differentiated into the Fleming and the Catahoula formations. The Catahoula sands mark the base of fresh water in the rocks of Rapides Parish (References 8 and 9).

The alluvial deposits range in thickness from 75 to 150 feet. They have transmissivities ranging from 1000 to 2000 gallons per day per square foot. These deposits serve as a source of water for irrigation purposes. The water in the alluvial deposit flows toward the Red River and is hydraulically interconnected with the river (References 8 and 9).

The Miocene sandstones are the primary source of drinking vater in the Alexandria area. Since the Upland Pleistocene deposits are not present in the Alexandria area, the alluvial deposits are directly underlain by the Miocene Sands starting at depths ranging from 75 to 150 feet. There are three fresh water bearing sands in the Miocene. They are designated the "400 foot," "700 foot," and "1,000 foot" sands. The water is under artesian pressure in all of these sand units. It is fresh, good quality potable water. Below the Catahoula, all sands yield saline water. At the facility, water is encountered at a depth of 7 1/2 to 14 feet. Ground water flow at the site is to the north and east (Figures 3-6 and 3-7). The Koppers Company's hydrogeologic investigation of Durawood in 1985 estimated the seepage velocity in the north direction to be 1.3 x 10⁻⁴ feet/second and 8 x 10⁻⁵ feet/second in the east direction (Reference 14).

3.4 RESOURCE UTILIZATION

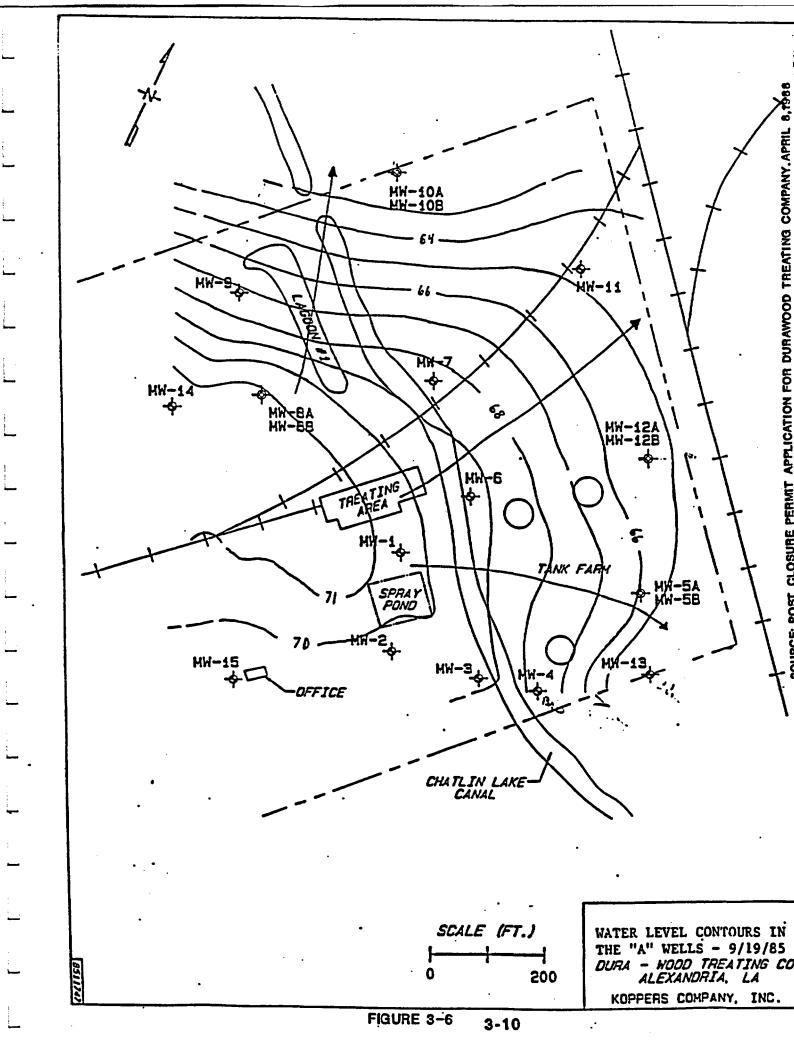
Water and adjacent land use are presented below.

Vater Use

Both surface and ground water are extensively used in the vicinity of the site.

Surface Vater

The Bayou Des Glaises has been classified as suitable for primary and secondary contact recreation and fish and wildlife propagation. The



waters of the Vermilion River and Bayou Teche are used primarily for navigation and to a lesser extent for irrigation. There are three surface water bodies, tributary to these receiving waters, within a 3 mile radius of the site: Hynson Bayou, Chatlin Lake Canal and Robert Bayou (Reference 14). There are also several unnamed lakes to the northeast and southeast. However, only Hynson Bayou and Chatlin Lake Canal are affected by the site. Hynson Bayou merges with Chatlin Lake Canal approximately 2 miles southeast of the site. Neither the Chatlin Lake Canal or Hynson Bayou are used for recreation or for agriculture (Reference 23).

Ground Vater

Ground water within a 3 mile radius of the site is used for domestic and municipal, and industrial and agricultural water supply. The City of Alexandria drinking water supply is provided by wells located in the Miocene deposits. The wells range in depths from 900 feet to almost 2,000 feet and the distribution system extends to areas within a 3 mile radius of the site (Reference 18). There are 12 drinking water wells within a 3 mile radius of the site. Ground water is available at 7 to 10 feet depths, but neither the quantity nor the quality is suitable for drinking (Reference 22). Ground water is also used for industrial supply. Industrial wells have depths ranging from 350 to 500 feet. Irrigation wells originate from the Red River Alluvial Aquifer, whose depth ranges from 50 to 100 feet. The main crops grown in the area are cotton, soybean and corn.

Adjacent Land Use

The zoning of the site is industrial. The area immediately to the west of the plant at a distance of less than 1/8 of a mile is residential. The areas north, south, east and further west are commercial, residential and industrial.

3.5 RECEPTORS

Durawood is located in an industrial area of Alexandria. Population and wildlife close to the facility are described below.

Population

The population within a 1 mile radius of the Durawood facility is approximately 3,500 to 4,000. There are 25 churches and 4 schools (Reference 26). The estimated population within a 4 mile radius of the site is 100,000, based on 1985 Chamber of Commerce estimates (Reference 14). The City of Alexandria, which is one-half mile north of the site, has a population of 65,000.

Vildlife

The Red Cockade Woodpecker (Picoiter Dendrocopos) is listed as an endangered species in the parish (Reference 4).

4. SOLID VASTE HANAGEMENT UNITS

This section of the PR/VSI report describes each of the nineteen SWMUs present at the facility and their potential for release and migration of hazardous constituents. A physical description, brief history and waste summary are also presented. Unit locations shown on Figure 2-2 are indicated by numerals 1 through 25; those shown on Figure 2-3 by letters A through W.

4.1 SWHU 1 CHATLIN LAKE CANAL IMPOUNDMENT (25)

The Chatlin Lake Canal impoundment was a RCRA regulated unit.

Description

The portion of the Chatlin Lake Canal (Figure 2-2, 25) which passed through the Durawood property was a stagnant body of water. It was 30 feet wide and had a surface area of approximately 25,000 square feet. The capacity of the canal, which was used as an impoundment, was 3,700 cubic yards. The canal ran northwest to southeast approximately 50 feet east of the treatment building. Initially the canal had no dikes. The dikes along the sides were added later, together with diversion channels on each side to convey rain water.

History

The canal was used as a surface impoundment for process contaminants even before Roy. O Martin Lumber Company acquired the site. The company decided to close the impoundment by recovering the preservatives through the oil/waste water separators. The waste water fraction was pumped to the City of Alexandria sever system for disposal. Contaminated soil and sludge (amounting to 9,000 tons) was removed from Chatlin Lake Canal the vacuum pump cooling pond and the area of the impoundment, above-ground tanks. The company contracted with Marine Shell Processors Inc., a recycle/reuse facility located in Morgan City, Louisiana, to excavate, transport and dispose of the contaminated sludge and soil. The excavations started on February 8, 1986 and were completed by April After removal was complete, local uncontaminated fill material was spread on the impoundment over which 2 feet of clay and 1 foot of top soil were laid and compacted. The closure plan submitted by the company was approved on July 26, 1985 by the LDEQ. Closure was approved by the LDEQ in its March 7, 1988 letter to the company (Reference 3). Clean closure of the impoundment was not achieved because several K001 constitutents in the soil and ground water exceeded detection limits after closure. As a result, the company submitted a post-closure permit application to the state on April 8, 1988 (Reference 14). Post-closure requirements include maintainance of the integrity of the impoundment and initiation of a ground water monitoring program.

Vastes

The canal was used as a surface impoundment for creosote and creosote

contaminated waste water from the process streams. This impoundment was in use since the facility was in existence, so in addition to creosote, pentachlorophenol (penta or PCP) may also be present because the previous owner used both PCP and creosote as preservatives.

Documented Release

Soil contamination still exists under the fill material of the closed surface impoundment. Contaminant concentration as high as 840 mg/kg of oil and grease in the soil, at a depth of 20 to 21.5 feet, has been detected near the canal. Soil contamination in the general vicinity is at a concentration of 970 mg/kg of oil and grease at a depth of 50 to 51.5 feet (Appendix C, page C-7). The results of surface soil sampling of the excavated impoundment and pond prior to filling are shown in Appendix C, page C-1. Pentachlorophenol concentration as high as 210 micrograms/liter, naphthalene at 4100 micrograms/liter, and phenanthrene plus anthracene at 6,500 micrograms/liter were some of the contaminants detected in the water fraction removed from soil samples using the Extraction Procedure (EP) method. Ground water contamination has also been documented under the Chatlin Lake Canal impoundment after closure. (The results of sampling from the monitoring wells are presented in Appendix C, pages C-48 through 74.) The table summarizing monitoring well sampling results before and after closure is presented in Appendix C, page C-75.

Potential Release

Soil/Ground Water

The potential for additional subsurface soil contamination is low since the impoundment is closed. However, the potential for further ground water contamination exists since waste water percolating through the contaminated subsurface soil layers could increase the concentrations of contaminants in the ground water. Contamination may still be occurring as the table summarizing the monitoring well sampling results before and after closure indicates (Appendix C, page C-75).

Surface Vater

The potential for surface water contamination is low since runoff would only be in contact with uncontaminated fill material on top of the closed impoundment. During the VSI, no evidence of contamination was observed in the surface runoff ditch traversing the impoundment.

Air/Subsurface Gas

Potential for release is low because the impoundment is closed and no HNu readings above background were recorded during the VSI. The use of compacted uncontaminated earth to fill the impoundment prevents the generation of subsurface gas. The nature of creosote also eliminates subsurface gas generation.

4.2 SVMU 2 VACUUM PUMP COOLING POND (20)

The vacuum pump cooling pond was a RCRA regulated unit.

Description

This vacuum pump cooling pond (Figure 2-2, 20) was located approximately 150 feet northwest of the treatment building. The pond area was approximately 12,500 square feet with a width of about 40 feet and a depth ranging from 6 to 8 feet, as measured from the top of the pond dike.

History

The pond was constructed in 1974 to impound the condensed creosote vapors and creosote contaminated waste water from the vacuum pump used in the treatment process.

In 1986 the company decided to close the pond along with the Chatlin Lake Canal impoundment. The same method was used to close the pond as the impoundment. The waste water fraction in the vacuum pond was pumped through the oil/waste water separators installed at the plant. Contaminated soil and sludge amounting to a total of 9,000 tons was excavated by Marine Shell Processors from the vacuum pump cooling pond, Chatlin Lake Canal impoundment and the area of the above-ground tanks. Excavations were completed on April 15, 1986. Local fill material was laid on top and compacted. Clean closure of the pond was not achieved because several KOO1 constituents in the soil and ground water exceeded detection limits after closure. As a result, the company submitted a post-closure permit application to the state on April 8, 1988 (Reference 14). Post-closure requirements include maintenance of the integrity of the closed pond and initiation of a ground water monitoring program.

Vastes

The pond was used to impound the condensed creosote vapors and creosote contaminated waste water from the vacuum pump, so creosote is the primary waste.

Documented Release

Soil contamination still exists under the pond, even after closure. Oil and grease at a concentration of 970 mg/kg has been detected at a depth of 50 to 51.5 feet under the impoundment and pond (Appendix C, page C-7). Pentachlorophenol concentration as high as 170 micrograms/liter, naphthalene at 11000 micrograms/liter and phenanthrene plus anthracene at 1400 micrograms/liter were some of the contaminants detected by EP extraction of the surface soil samples of the excavated pond collected prior to filling (Reference 14; Appendix C, page C-1). Ground water contamination has also been documented under the vacuum pump cooling pond after closure (the results of sampling from the monitoring wells are presented in Appendix C, page C-48 through 74). The table summarizing monitoring well sampling results before and after closure

(Appendix C, page C-75) indicates that the concentrations of contaminants have been steadily increasing even after closure.

Potential Release

Soil/Ground Vater

The potential for additional surface and subsurface soil contamination is low since the pond is closed. However, the potential for further ground water contamination exists since waste water percolating through the contaminated subsurface soil layers could increase the concentration of contaminants in the ground water. Contamination may still be occurring as the table summarizing monitoring well sampling results before and after closure indicates (Appendix C. page C-75).

Surface Vater

The potential for surface water contamination is low since surface runoff would only be in contact with the uncontaminated fill material on top of the closed pond.

Air/Subsurface Gas

Potential for release is low because the pond is closed and no HNu readings above background were recorded during the VSI. The use of compacted uncontaminated earth to fill the pond prevents the generation of subsurface gas. The nature of creosote also eliminates subsurface gas generation.

4.3 SWMU 3 TEMPORARY TREATED WOOD STORAGE AREA (W)

The temporary treated wood storage area is not a RCRA regulated unit.

Description

The area (Figure 2-3, W) is located at the southwest side of the treatment building and immediately in front of the treatment cylinders. It is a concrete pond approximately 250 feet long by 50 feet wide. The pad extends to treatment cylinders 1 (F) and 2 (G) but not to treatment cylinder 3 (H), which is currently being installed on-site. There are rail lines on the pad leading to the treatment cylinders (Photograph 6). The pad is sloped towards the treatment building. There are concrete drainage ditches on the pad which serve to convey any dripped creosote into the concrete sumps in front of the treatment cylinders. Wood waiting to be treated is loaded onto tram cars and pushed into the treatment cylinders. Treated wood is left on the concrete pad for approximately 24 hours to drip.

History

The concrete pad was constructed in 1987.

Vastes

The wastes are creosote and creosote-like materials dripping from the

treated wood onto the concrete pad.

Documented Release

During the RCRA inspections on December 1, 1982 (Reference 15), March 15, 1984 (Reference 16) and October 21, 1985 (Reference 17) drippings of creosote-like material onto and near the railroad tracks were noted. A NOV dated April 3, 1984 was issued by the LDEQ (Reference 13) for allowing creosote to remain on the ground in the vicinity of the railroad tracks. The company and its consultant (Ball Engineering) presented sampling results to the LDEQ on April 25, 1984 (Reference 2) contending that the material was technically not creosote. The State in the interoffice correspondence of October 27, 1986 (Reference 11) suggested that these drippings may be addressed as SWMUs regardless of whether they were technically creosote. During the VSI, stained patches were noted on the concrete pad (Photograph 6), but no stained areas outside the concrete pad were observed.

Potential Release

Soil/Ground Water

The potential for release is low since this is a concrete pad and is sloped towards the sumps at front of the treatment cylinders. Periodically, the stained areas are hosed down with water, which then collects in these sumps. From the sumps the waste water enters the primary oil/waste water separator (I).

Surface Vater

The potential for release is low since the pad is concrete and is sloped towards the sumps at front of the treatment cylinders.

Air/Subsurface Gas

The release potential is low. No HNu readings above background were recorded during the VSI at various points above the concrete pad.

4.4 SWHU 4 PRIMARY OIL/VASTE VATER SEPARATOR (I)

The primary oil/waste water separator (I) is not a RCRA regulated unit.

Description

This unit (Figure 2-3, I) is located inside the treatment building (Photographs 15 and 19). It is approximately 8 feet in diameter and 132 feet long. The creosote/waste water condensate from the steam-jet ejector enters this separator. The creosote fraction is conveyed to the main separator sump (J) and the waste water fraction to the floc tank and sump (L and M). This separator is also used to assist in further clarification of the waste water fraction from the above-ground railroad car separator (K).

History

The primary oil/waste water separator was installed in 1982. The separator was mentioned in the RCRA Generator Compliance Checklist of April 24, 1985 (Reference 7).

Vastes

The wastes are creosote, oil and waste water mixtures.

Documented Release

There are no documented releases from this unit and no visible signs of releases due to spills or leaks were observed during the VSI.

Potential Release

Soil/Ground Vater

There is no potential for release to soil/ground water. Any spill or leak from this separator will collect either in the concrete sump inside the treatment building (R) or in the sumps at the front of the treatment cylinders. The collected waste water will be recycled through the primary oil/waste water separator.

Surface Vater

There is no potential for release to surface water due to the floor of the treatment building where the separator is located. Any spills will collect in the concrete sump inside the treatment building or in the sumps at the front of the treatment cylinders.

Air/Subsurface Gas

There is a low potential for an air release. Any spills from this separator could result in some minor air release of the volatile creosote constituents. No volatiles were detected during the VSI around this unit. There was no visual evidence of soil contamination in the area, so the potential for subsurface gas generation is low.

4.5 SWMU 5, 6 AND 7 CONCRETE SUMPS AT FRONT OF TREATMENT CYLINDERS F AND G

The three concrete sumps at the front of the treatment cylinders are not RCRA regulated units.

Description

The two treatment cylinders (Figure 2-3, F and G) currently in use have concrete sumps at the front to catch any creosote drippings from the cylinders. The two sumps in front of the first cylinder (F) are inside the treatment building. They are approximately 25 feet long, 5 feet wide and have a depth of approximately 3 feet (Photograph 19). The

third sump in front of the other treatment cylinder (G) outside the treatment building is 20 feet long, 12 feet wide and has a depth of approximately 3 feet. The drippings collected in these concrete sumps are returned by gravity to the main separator sump (J) outside the treatment building. The main separator sump is part of the facility's oil/waste water separation system.

History

The sumps were constructed in 1981 and first described in the RCRA site inspection report of March 15, 1984 (Reference 16).

Vastes

Wastes are creosote and creosote contaminated waste water from the treatment cylinders.

Documented Release

There was no documented release mentioned in any site inspection report of the facility and no visible signs of spills were observed outside the sumps during the VSI.

Potential Release

Soil/Ground Vater

The potential is negligible since the sumps are concrete and any spills are immediately pumped to the primary oil/waste water separator and are recycled through the system.

Surface Vater

The potential for surface water contamination is negligible since the sumps are concrete and spills are recycled through the system.

Air/Subsurface Gas

Potential air releases from these sumps are minimal since any wastes are immediately recycled. An HNu reading of 0.2 ppm above background was recorded in front of treatment cylinders during the VSI.

4.6 SVMU 8, 9 AND 10 CONDENSERS (T)

The three condensers are not RCRA regulated units.

Description

The steam-creosote vapors from the treatment cylinders, and from the steam-jet ejector used to apply vacuum to the treatment cylinders, are conveyed to a series of three condensers (one for each tank) (Figure 2-3, T). They are components of a non-contact cooling system located in

the work tank area on a concrete pad surrounded by a concrete dike with drain. The condensers are mounted approximately 25 feet above ground level (Photograph 3) and have approximately 1,500 square feet of cooling area each. The non-contact cooling water is drawn from the spray cooling pond (Figure 2-2, 5)located southeast of the treatment building. The condensate from the condensers is conveyed to a series of three drop down tanks and from there, it is pumped to the primary oil/waste water separator (I).

History

The condensers were erected in 1983, 1984 and 1988.

Vastes

Wastes are creosote and waste water mixtures.

Documented Release

There was no documented release mentioned in any site inspection report of the facility and no visible signs of release were observed during the VSI.

Potential Release

Soil/Ground Vater

The potential for release is low but is possible if the condenser tubing develops a leak, or ruptures, resulting in the non-contact cooling water becoming contaminated and spread onto the spray cooling pond.

Surface Vater

The potential is negligible since no surface waters are in the immediate vicinity of the condensers or the spray cooling pond.

Air/Subsurface Gas

The potential for air releases exist if the condensers fail and hot creosote-steam vapors are vented to the atmosphere. However, at the present time the condensers appear to be in good condition.

4.7 SVMU 11, 12 AND 13 DROP DOWN TANKS (V)

The three drop down tanks are not RCRA regulated units.

Description

These units (Figure 2-3, V) are approximately 9 feet high and 6 feet in diameter. The creosote/waste water condensate from the condensers enters the three drop down tanks which are located in the work tank area. From these tanks the creosote and waste water enters the primary oil/waste water separator (I).

History

The drop down tanks were erected during 1983 and 1984.

Vastes

The wastes are creosote/waste water condensates.

Documented Release

There was no documented release mentioned in any site inspection report of the facility and no visible signs of release were observed during the VSI.

Potential Release

Soil/Ground Water

The potential for release from any spills is low since the work tank area has a concrete base and is surrounded by a concrete dike with drain. This drain will convey any spill to the sump inside the treatment building (R).

Surface Vater

The potential for release to surface water does not exist because the floor of the drop down tanks is concrete.

Air/Subsurface Gas

The potential for an air release is a possibility since the creosote/waste water condensate spills occurring from these drop down tanks will be at an elevated temperature and therefore could release some volatiles. However, at the present time the tanks appear to be in good condition.

4.8 SWMU 14 MAIN SEPARATOR SUMP (J)

The main separator sump is not a RCRA regulated unit.

Description

The main separator sump (Figure 2-3, J) is located on the northwest side of the treatment building (Photograph 2). This is an approximately 43 feet long by 8 feet wide and 5 feet deep concrete sump. The sump is equipped with baffles. The creosote/waste water streams entering the sump are from the primary oil/waste water separator (I), the floc tank and sump (L and M), the sump inside the treatment building (R), the above-ground railroad car separator (K) and spillage collected in the concrete sumps at the front of the treatment cylinders. The waste water fraction from the sump is returned to the primary oil/waste water separator (I) for further separation. In addition, the bottom of the sump is agitated so that better separation will take place.

History

This sump has been in use since Durawood purchased the facility from Koppers Company in 1970.

Vastes

The wastes are creosote and waste water mixtures.

Documented Release

There was no documented release mentioned in any site inspection report of the facility and no visible signs of release were observed.

Potential Release

Soil/Ground Vater

The sump had sufficient freeboard during the VSI and no spills were detected. The concrete appears to be in fairly good condition.

Surface Vater

The potential for release is negligible. The sump had sufficient freeboard, which eliminates any overflows to surface water bodies.

Air/Subsurface Gas

Potential for an air release is low. No HNu readings above background were recorded at or close to the sump.

4.9 SVHU 15 SUMP INSIDE TREATMENT BUILDING (R)

The sump inside the treatment building is not a RCRA regulated unit.

Description

The concrete sump (Figure 2-3, R) located inside the treatment building is approximately 30 feet long by 12 feet wide and 4 feet deep (Photograph 16). The floor of the treatment building is sloped towards this sump, which acts as a collection unit for any spills occurring in this area. The drain from the work tank area also empties into this sump. The creosote and waste water mixture from this sump enters the main separator sump (J) located at the northwest side of the treatment building.

History

This sump has been in existence since Durawood purchased the facility from Koppers Company in 1970.

Vastes

The vastes are creosote spills.

Documented Release

There was no documented release mentioned in any site inspection reports of the facility and no visible signs of release were observed.

Potential Release

Soil/Ground Vater

No release potential to soil and ground water exists since the concrete sump is located inside the treatment building, which has a concrete floor.

Surface Vater

Release potential is negligible since the treatment building has a concrete floor.

Air/Subsurface Gas

The potential for release to air is low. No HNu readings above background were recorded anywhere inside the treatment building during the VSI.

4.10 SWMU 16 ABOVE-GROUND RAILROAD CAR SEPARATOR (K)

The above-ground railroad car separator is not a RCRA regulated unit.

Description

This unit is a converted railroad car (Figure 2-3, K) approximately 30 feet long and 6 feet in diameter located northwest of the treatment building between two treatment cylinders (G and H) (Photograph 1). The waste water fraction from the main separator sump (J) enters this separator. The oil fraction, after separation, re-enters the main separator sump for further separation and the waste water fraction enters the primary oil/waste water separator (I) inside the treatment building.

History

The railroad car separator was installed in 1982.

Vastes

The vastes are creosote and vaste vater mixtures.

Documented Release

There was no documented release mentioned in any site inspection reports of the facility and no visible signs of release were observed during the VSI.

Potential Release

Soil/Ground Water

The unit is located outside of the contaminated area on gravelly ground. Therefore, any spills from leaking valves or ruptures from the above-ground railroad car separator could potentially contaminate the soil and percolate down to the water table. However, since no stained areas around this separator were observed, the potential for such contamination should be considered low at the present time.

Surface Vater

The capacity of the tank and the near-level ground around the separator minimizes the contamination of surface water bodies. The closest surface water course is the ditch located in the vicinity of the mechanics shop, approximately 300 yards west of the separator.

Air/Subsurface Gas

The potential for release to air is low since the spill would be a creosote and waste water mixture at ambient temperature with a low volatization potential. The potential for subsurface gas generation would be low because of the nature of creosote.

4.11 SWMU 17 FLOC TANK AND SUMP (L AND M)

The floc tank and sump are not RCRA regulated units.

Description

The floc tank (Figure 2-3, L) and sump (Figure 2-3, M) are located inside the work tank area. The floc tank has a capacity of 20,000 gallons (Photograph 3, the first tank on the right) and is used to treat the waste water fraction of the primary oil/waste water separator (I) inside the treatment building. Liquid flocculating agents are added to this waste stream to separate any remaining oil. The recovered oil then enters the sump (M) adjacent to the floc tank from where it is either pumped back to the work tanks or into the main separator sump (J) on the northwest side of the treatment building. The waste water fraction, together with the flocculent aid from the floc tank, enter the waste water outfall oil separator sump (S).

History

The floc tank and sump were constructed in 1985.

Vastes

Wastes are creosote and waste water mixtures.

Documented Release

There was no documented release mentioned in any site inspection report

of the facility and no visible signs of release were observed during the VSI.

Potential Release

Soil/Ground Vater

The release potential is low since the floc tank and sump are located within the concrete and diked area of the work tanks. Any releases will flow to the drain surrounding the diked work tank area and be recycled through the primary oil/waste water separator.

Surface Vater

The release potential is low since the area around the floc tank and sump is concrete and any releases will be recycled through the primary oil/waste water separator.

Air/Subsurface Gas

The potential for any air release is low because of the nature of creosote and since the creosote fraction entering the floc tank is very dilute. No HNu readings above background were recorded close to the floc tank and sump.

4.12 SVMU 18 WASTE WATER OUTFALL OIL SEPARATOR SUMP (S)

The waste water outfall oil separator sump is not a RCRA regulated unit.

Description

The size of this concrete sump (Figure 2-3, S) is approximately 16 feet long by 8 feet wide and 6 feet deep. This is the last stage of the oil/waste water separation system at the facility (Photograph 4). The waste water fraction from the floc tank is routed to this sump for further separation. The output from the peristaltic pump (Photograph 9), which extracts contaminated ground water from under the closed surface impoundment and pond, is also routed to this sump. Any recovered oil is pumped back to the drain surrounding the treatment building. The waste water fraction is pumped to the City of Alexandria waste water treatment plant located approximately one mile from the facility. Approximately 9,900 gallons per day are discharged to the treatment plant.

History

The waste water outfall oil separator sump was installed in 1984.

Vastes

The vastes are creosote and vaste vater mixtures.

Documented Release

During the VSI, the sump itself had no signs of on-site release, but the waste water in the sumps had an oily sheen to it, indicating that the discharge to the City of Alexandria waste water treatment plant may not be totally free of creosote and fuel oil components. Durawood Treating Company and its consultants analyze the waste water prior to discharge at quarterly intervals, and their reports are provided to the City of Alexandria. The waste stream is analyzed only for oil and grease, arsenic, chromium and copper. Oil and grease concentrations range from 19 to 69 mg/liter (Appendix C, page C-76). The waste stream is not analyzed for any of the creosote components. Re-routing the peristaltic pump output through the primary oil/waste water separator (I) or the main separator sump (J) could alleviate discharges of contaminated ground water into the City of Alexandria POTW.

Potential Release

Soil/Ground Vater

The release potential is low since the discharge is into the concrete sewer pipes of the City of Alexandria.

Surface Vater

Release potential to the Red River does exist, but only through the outfall of the city's treatment plant.

Air/Subsurface Gas

The potential for air release exists but the concentrations are expected to be low due the diluted creosote component.

4.13 SVHU 19 TREATED VOOD DRYING PAD (3)

The treated wood drying pad is not a RCRA regulated unit.

Description

The concrete drying pad for treated wood (Figure 2-2, 3) measures approximately 500 feet long by 120 feet wide. The pad is located approximately 300 yards southwest of the treatment building alongside a drainage ditch, which is part of the Hynson Bayou tributary system. The pad is made up of concrete strips approximately 10 feet long by 8 feet wide and the strips are laid 5 feet apart (Photograph 8). The pad is not contained. The treated wood stays on the pad for periods ranging from 24 hours to 4 months.

History

This pad was constructed during 1986 and 1987. Eventually, the company plans to concrete the whole pad.

Vastes

The wastes are creosote and creosote-fuel oil from treated wood.

Documented Release

During the VSI, a stained pathway leading from the pad towards the drainage ditch, which runs alongside the pad, was observed. However, no stains were observed in the ditch water.

Potential Release

Soil/Ground Vater

There is a low potential for soil and ground water contamination in this area due to residual drippings of creosote from the treated wood onto the ground between the concrete strips. Also, some creosote could get washed off the pad and onto the soil during periods of heavy rainfall.

Surface Vater

There is a potential for contamination due to rain water washing the creosote off the treated wood and into the adjacent ditch and eventually into Eynson Bayou.

Air/Subsurface Gas

The potential for release exists, but it is low because only an insignificant quantity of the unabsorbed creosote is available for volatilization. No HNu readings above background were recorded during the VSI. Potential for subsurface gas generation is low because of the nature of the creosote.

5. RELEASE PATHWAYS AND MECHANISMS

This section of the PR/VSI report addresses the potential releases of hazardous constituents migrating into various environmental media. Migration pathways in air, soil, surface water and ground water are detailed, and the mechanisms involved are briefly discussed.

5.1 AIR

During the VSI, continuous air monitoring for volatiles was conducted with an HNu. Oxygen levels were monitored with an oxygen meter. All readings were normal except for an organic vapor reading of 0.2 ppm above background in front of the treatment cylinders. However, this was well below the American Conference of Governmental Industrial Hygienists (ACGIH) guidelines for pure creosote (Time Weighted Average (TWA) 10 hours-2.5 ppm and Threshold Limit Value (TLV) of 5 ppm) and is thus considered to be insignificant.

Pathways

There is no evidence of either past or present significant air release pathways at the site.

Mechanisms

The only hazardous material handled at the site is creosote, which consists mainly of PAHs. The typical composition of creosote is listed in Table 2-2. These constituents are not considered to be volatile. However, there may be a small fraction of the creosote which could become volatilized at temperatures of 150 to 200 °F, which are typically the treatment cylinder temperatures during the creosoting process. During the VSI, these were found to be insignificant and all readings (with one exception) were at normal background levels.

Compliance With Regulations

The RCRA inspection reports and NOVs issued by the LDEQ do not mention any air violations by Durawood Treating Company. The last inspection by the LDEQ, Office of Air Quality on May 6, 1987 found the facility to be in compliance with applicable regulations (Reference 24).

5.2 SOIL

Observations of soil conditions were made during the VSI.

Pathways

The contaminated subsurface soil may contaminate the ground water under the facility particularly during periods of heavy rainfall. Contaminated surface soil from the facility may get washed into the drainage ditches which enter Chatlin Lake Canal and Hynson Bayou.

Hechanisms

Soil borings at the site reveal oil and grease contamination at 50 to 51.5 feet below ground level, which may lead to ground water contamination since at Durawood ground water is encountered at a depth of 7 1/2 to 14 feet. Also, stained soil near the treated wood pad and other units may get washed into the drainage ditch traversing the facility and eventually enter Chatlin Lake Canal and Hynson Bayou.

5.3 SURFACE VATER

Surface water pathways and migration mechanisms were identified during the VSI and from topographic maps.

Pathvays

There are five surface drainage courses at the Durawood facility. The first surface runoff path is the drainage ditch (Photographs 21 and 22) which traverses the Chatlin Lake Canal impoundment. The northern half of the ditch flows in a northwesterly direction (Photograph 13) and enters the woods on the north side of the property. The southern half of the ditch slopes towards the southeast and enters the Chatlin Lake Canal (Photograph 12) at the southeastern boundary of the facility. The second surface runoff path starts between the office building and the treatment building, alongside the southern end of the concrete treated wood drying pad (Photograph 8) and enters Hynson Bayou (Photograph 14) which flows through the site in a north-south direction. The third path flows along the northern boundary of the facility and also enters Hynson The fourth path starts 50 yards east of the mechanics shop and three hundred yards west of the treatment building. This enters an underground pipe close to the mechanics shop (Photograph 10) and finally empties into Hynson Bayou (Photograph 11). The fifth path is Hynson Bayou, which traverses the Durawood facility approximately 1,000 feet west of the office building and eventually joins the Chatlin Lake Canal approximately two miles downstream.

The entire property, with the exception of the treatment building, is within the 100-year floodplain of the Red River. The closed surface impoundment and pond are within the "AO" (areas of 100-year shallow flooding where flood depths are between 1 and 3 feet) designated area (Reference 5).

Mechanisms

Rainfall collected in the surface impoundment and pond will eventually enter the drainage ditch traversing the Chatlin Lake Canal impoundment. The drainage ditch slopes to the southeast in the southern portion of the facility and northeast in the northern portion. Significant surface water contamination is possible if there is a major spill from the area of the above-ground storage tanks, which would lead to contamination of the surface runoff traversing the closed impoundment and would enter Chatlin Lake Canal. Rainfall onto the concrete treated wood drying pad

may wash small quantities of unabsorbed creosote into the drainage ditch adjoining the pad. The concrete pad is not diked. A stained pathway leading from the pad to the drainage ditch can be seen on Photograph 8. The possibility of any direct creosote contamination of surface water in the other surface runoff pathways is remote since these do not traverse any creosote contaminated areas.

5.4 GROUND VATER

Ground water contamination has been documented at the site (Appendix C, page C-48). Migration of K001 constituents has been detected in the monitoring wells installed on-site.

Pathways

The soil beneath the closed surface impoundment and pond on-site is still contaminated (Appendix C, page C-1). This may represent a major source of ground water contamination at Durawood. Other possible sources of ground water contamination are the above-ground storage tanks. Since the dikes around the tanks are unlined, spills could result in ground water contamination. Another possible minor source contributing to ground water contamination is rain water washing unabsorbed creosote from the treated wood drying pad. This rain water could percolate down to the water table. Still another possible source is the above-ground railroad car separator if it ruptures or overflows.

Mechanisms

The facility is underlain by silty clay and clay. Even though the permeabilities of these types of soils are low, they could still allow percolation of contaminated water. This is evident from the significant ground water contamination at the site. Once the contaminants reach the ground water table, they move along the gradient, which at the facility is to the north and east.

Remedial Vork

Ground water contamination has been documented at the facility. Koppers Company Inc. conducted a hydrogeologic investigation of the facility in 1985 to satisfy regulatory concerns regarding the potential for areal and vertical migration of contaminants.

There are 19 monitoring wells and 16 soil borings on-site. Monitoring well MV1 is considered to be an upgradient well. The locations of monitoring wells and soil borings are shown in Appendix C, pages C-7 and 25. The monitoring wells were sampled on July 10, 1985, August 21, 1985 and September 19-30, 1985, before closure of the impoundments. The water samples were analyzed for phenols, pentachlorophenol (PCP), naphthalene and Total Organic Carbon (TOC). The results of the three analyses are shown in Appendix C, pages C-47 and 48.

Monitoring Wells MW14 and MW15 may be considered to be background wells. Elevated TOC values were noted in wells MW4, MW6, MW7, MW8A and MW8B.

Phenols were present in significant concentrations above background in MW4, MW5A, MW5B, MW6, MW7 and MW9. PCP at elevated levels was found in MW5A, MW7, MW8A and MW9. Naphthalene at concentrations above background was found in wells MW4, MW5A, MW6, MW7, MW8A, MW8B and MW9. PAHs, which constitute a significant fraction of creosote, were found at concentrations higher than background in wells MW1, MW2, MW3, MW4, MW5, MW5B, MW6, MW7, MW8A, MW8B, MW9, MW10B, MW11 and MW12B.

The post-closure permit submitted by the company calls for sampling of monitoring wells MV1, MV6, MV10A, MV12A and MV13 twice a year. Pre-closure and post-closure sampling results for these five monitoring wells are presented in Appendix C, page C-75. K001 contamination was detected in these wells during the 1985 and 1987 sampling. The table reveals that the levels of contamination, including phenols and PAHs, have been steadily rising in MV6 and MV13, showing that the ground water contaminant plume may still be spreading. In addition, concentrations of some K001 constituents (such as napthalene) have also been steadily increasing in MV10, MV12A and MV13 when compared to upgradient well MV1.

The extent of contamination may be larger than shown in the figure submitted by Durawood as part of is post-closure permit application. No comparisons could be made for the other monitoring wells since post-closure sampling has not been conducted in any of them. In addition, analytical data for soil borings point to oil and grease contamination at a depth of 50 to 51.5 feet (Appendix C, page C-7).

A peristaltic ("pulse") recovery pump has been installed on MW-6 (Photograph 9). Ground water drawn by this pump is transferred to the waste water outfall oil separator sump (S) located east of the floc tank. Any recovered oil is pumped back to the drain surrounding the treatment building. The waste water fraction is discharged to the City of Alexandria waste water treatment plant. The peristaltic pump, after a period of operation, will be switched to MW-7.

6. AREAS OF CONCERN

Additional areas of concern (AOC) and issues which may require further action by the company include the problems associated with ground water contamination, dikes and spill areas around the above-ground storage tanks, underground railroad car (oil/waste water separator), installation of the third treatment cylinder and the truck unloading pad. Unit locations shown on Figure 2-2 are indicated by numerals 1 through 25; those shown on Figure 2-3 by letters A through W.

6.1 ABOVE-GROUND STORAGE TANKS (O, P AND Q)

These are three 100,000 gallon creosote and fuel oil tanks (Figure 2-3, 0, P and Q) in this area. The dikes around the above-ground storage tanks, located at the southeast corner of the property, are approximately four feet high.

These dikes around the tanks do not appear to be compacted or lined (Photograph 22). The dikes were found stained during a general inspection conducted by the LDEQ, Office of Solid and Hazardous Waste, 1984 (Reference December 17, 6). According to Durawood representatives, the stains originated from the spill, which was a result of cracked product valves while the facility was operated by the Koppers Company. At closure, contaminated soil was removed from this This was completed on April 15, 1986. It is uncertain whether the dikes would be able to contain any major spill from the tanks. Some of the creosote pipelines run throughout the dikes, providing additional outlets because the earth around the pipes is not compacted. Uncontained spills would contaminate the soil and ground water. There is, therefore, the possibility of spills breaking through the dikes and contaminating large areas and eventually aggravating the problem of ground water Surface water contamination is also possible since one contamination. of the surface water runoff pathways leading into Chatlin Lake Canal runs close to the above-ground tanks (Photograph 22).

6.2 UNDERGROUND RAILROAD CAR (OIL/WASTE WATER SEPARATOR)

Spills near an underground storage tank were mentioned in the LDEQ, Hazardous Waste Management Division letter of May 11, 1983 (Reference 10). The underground railroad car was also mentioned in the RCRA inspection report of March 15, 1984 (Reference 16). The unit was reported to be a 2,000 gallon creosote waste water tank for containing spills. It was reportedly located under the concrete pad near the creosote unloading point. The creosote was then pumped to the process tanks and the waste water fraction discharged to the city sewers. According to the facility representatives present during the VSI, this unit never existed on-site. There were no visual indications of the presence of an underground railroad car oil/waste water separator during the VSI.

6.3 INSTALLATION OF A THIRD TREATMENT CYLINDER (H)

A third treatment cylinder (Figure 2-3, H) is currently being installed

on the site and has asbestos insulation (Photograph 1, first cylinder on the right). The concrete pad in front of the other two treatment cylinders does not extend to the third cylinder. Additionally, there is no concrete sump at the front of the new cylinder to catch any creosote drippings (Photograph 6, new treatment cylinder is to the extreme left; Photograph 1).

6.4 TRUCK UNLOADING PAD (N)

This concrete truck unloading pad (Figure 2-3, N) is an approximately 8 inch thick, 20 feet by 20 feet area located south of the treatment building. It has two small concrete sumps on its southeastern end for catching any creosote drippings from the tank trucks unloading at this pad. The pad was constructed in 1984. Prior to the pad's construction, the ground was graded and unloading took place on native soil. Spills were not contained and any spills prior to 1984 remained in the area. Since the construction of the pad and sumps, creosote spills are collected in the two small sumps and then pumped via pipes to the concrete drain in the work tank area. Approximately 10 to 15 feet of this pipeline runs underground at a depth of one foot.

7. CONCLUSIONS AND RECOMMENDATIONS

On April 6, 1988, the FIT conducted a RCRA Facility Assessment (RFA) Visual Site Inspection (VSI) of the Durawood Treatment Facility in Pineville, Louisiana. The information obtained during the VSI, together with background information collected during the course of the RFA project, lead to the following conclusions and recommendations.

7.1 SWMU 1 CHATLIN LAKE CANAL IMPOUNDMENT (25)

Conclusion

This was a RCRA regulated unit and is being addressed under the RCRA program. Closure plan was approved by the LDEQ on July 26, 1985 and closure was approved in the LDEQ March 7, 1988 letter to the company. The unit has been closed but clean closure was not achieved because several K001 constituents in the soil and ground water exceeded detection limits after closure. The facility applied to the LDEQ on April 8, 1988 for a post-closure permit. The permit required that the integrity of the impoundment be maintained and that a ground water monitoring system be initiated. Samples taken pursuant to the monitoring program indicate that soil contamination still exists under the fill material of the closed surface impoundment and that ground water contamination may still be increasing after closure.

Recommendation

RFI is not recommended.

7.2 SVMU 2 VACUUM PUMP COOLING POND (20)

Conclusion

This was a RCRA regulated unit and is being addressed under the RCRA program. In 1986 the company decided to close the pond along with the Chatlin Lake Canal Impoundment. Contaminated soil and sludge excavations were completed on April 15, 1986. The unit has been closed but clean closure of the pond was not achieved because several KOO1 constituents in the soil and ground water exceeded detection limits after closure. The facility applied to the LDEQ on April 8, 1988 for a post-closure permit. The permit required that the integrity of the closed pond be maintained and that a ground water monitoring program be initiated. Samples taken pursuant to the monitoring program indicate that soil contamination still exists under the fill material of the closed pond and that ground water contamination has been steadily increasing even after closure.

Recommendation

RFI is not recommended.

7.3 SWHU 3 TEHPORARY TREATED WOOD STORAGE AREA (V)

Conclusion

The area is a concrete pad in front of treatment cylinders 1 and 2, but it does not extend to cylinder 3, which is currently being installed on-site. There are concrete drainage ditches on the pad which serve to convey any dripped material into the concrete sumps in front of the treatment cylinders. Treated wood is left on the concrete pad for approximately 24 hours to drip. As a result of the RCRA inspections in 1982 and 1984, a NOV dated April 3, 1984 was issued by the LDEQ for allowing creosote to remain in the vicinity of the railroad tracks. The company contended that the material was technically not creosote. The State suggested on October 27, 1986 that these drippings may be addressed as SWMUs regardless of whether they were technically creosote. During the VSI, stained patches were noted on the concrete pad, but no stained areas outside the concrete pad were observed.

Recommendation

RFI is not recommended.

7.4 SVMU 4 PRIMARY OIL/WASTE WATER SEPARATOR (I)

Conclusion

The unit is located inside the treatment building. Spills or leaks will collect either in the concrete sump inside the treatment building or in the concrete sumps at the front of the treatment cylinders. There are no documented releases from this unit and no visible signs of releases due to spills or leaks were observed during the VSI.

Recommendation

RFI is not recommended.

7.5 SVMU 5, 6, AND 7 CONCRETE SUMPS AT FRONT OF TREATMENT CYLINDERS F AND G

Conclusion

Two sumps in front of the first cylinder are inside the treatment building. The third sump is in front of the other treatment cylinder outside the treatment building. Drippings in these sumps are returned by gravity into the main separator sump outside the treatment building, which is part of the facility's oil/waste vater separation system. There was no documented release mentioned in any site inspection report of the facility and no visible signs of spills were observed outside the sumps during the VSI.

Recommendation

RFI is not recommended.

7.6 SWHU 8, 9 AND 10 CONDENSERS (T)

Conclusion

This series of three condensers are components of a non-contact cooling system located in the work tank area on a concrete pad surrounded by a concrete dike with drain that will convey any leaked material into the sump inside the treatment building. There was no documented release mentioned in any site inspection report of the facility and no visible signs of release were observed during the VSI.

Recommendation

RFI is not recommended.

7.7 SWHU 11, 12 AND 13 DROP DOWN TANKS (V)

Conclusion

The creosote/waste water condensate enters these tanks located in the work tank area on a concrete pad surrounded by a concrete dike with drain that will convey spills into the sump inside the treatment building. There was no documented release mentioned in any site inspection report of the facility and no visible signs of release were observed during the VSI.

Recommendation

RFI is not recommended.

7.8 SVMU 14 MAIN SEPARATOR SUMP (J)

Conclusion

This concrete sump located outside the treatment building receives creosote/waste water streams from the facility's sumps and separators. The bottom-agitated sump is equipped with baffles and has sufficient freeboard to preclude overflow. There was no documented release mentioned in any site inspection report of the facility and no visible signs of release were observed during the VSI.

Recommendation

RFI is not recommended.

7.9 SVMU 15 SUMP INSIDE TREATMENT BUILDING (R)

Conclusion

This concrete sump acts as a collection unit for any spills occurring in this area and is located inside the treatment building. The building has a concrete floor sloped towards this sump. There was no documented release mentioned in any site inspection report of the facility and no visible signs of release were observed during the VSI.

Recommendation

RFI is not recommended.

7.10 SVMU 16 ABOVE-GROUND RAILROAD CAR SEPARATOR (K)

Conclusion

This converted railroad car unit handles the waste water fraction conveyed from the main separator sumps. This unit is located outside of the containment area on gravelly ground. Therefore, any spills from leaking valves or ruptures from the above-ground tank could potentially contaminate the soil and percolate down to the water table. There was no documented release mentioned in any site inspection report of the facility and no visible signs of release were observed during the VSI.

Recommendation

RFI is not recommended.

7.11 SWHU 17 FLOC TANK AND SUMP (L AND M)

Conclusion

The floc tank is used to treat the waste water fraction of the primary oil-waste water separator. The recovered oil enters the sump adjacent to the floc tank. Both the tank and sump are located within the concrete work tank area. This area is surrounded by a concrete dike with drain that will convey releases into the sump inside the treatment building. There was no documented release mentioned in any site inspection report of the facility and no visible signs of release were observed during the VSI.

Recommendation

RFI is not recommended.

7.12 SVMU 18 VASTE VATER OUTFALL OIL SEPARATOR SUMP (S)

Conclusion

During the VSI, the sump itself had no signs of on-site release, but the waste water in the sump had an oily sheen on it, indicating that the discharge to the City of Alexandria waste water treatment plant may not be totally free of creosote and fuel oil components. Moreover, the peristaltic pump discharges contamianted ground water into the City of Alexandria POTW. However, these matters fall under the jurisdiction of the City of Alexandria's pretreatment program, but may need to be brought to the City's attention.

Recommendation

RFI is not recommended.

7.13 SVMU 19 TREATED WOOD DRYING PAD (3)

Conclusion

This area is made up of concrete strips approximately 10 feet long by 8 feet wide. The strips are laid 5 feet apart. The pad is not contained and is located alongside the drainage ditch, which is part of the Hynson Bayou tributary system. During the VSI, a creosote stained pathway leading from the pad towards the drainage ditch was observed. No stains were observed in the ditch water.

Recommendation

RFI is recommended.

7.14 AOC 1 ABOVE-GROUND STORAGE TANKS (O, P AND Q)

Conclusion

The dikes around the above-ground storage tanks located at the southeast corner of the property are approximately four feet high and do not appear to be compacted or lined. It is uncertain whether the dikes would be able to contain any major spill from the tanks. Some of the creosote pipelines run throughout the dikes providing additional outlets because the earth around the pipes is not compacted. Uncontained spills would contaminate the soil and ground water. The dikes were stained during a general inspection conducted by the LDEQ on December 17, 1984.

Recommendation

RFI is recommended.

7.15 AOC 2 UNDERGROUND RAILROAD CAR (OIL/WASTE WATER SEPARATOR)

Conclusion

Spills near an underground storage tank were mentioned in the LDEQ letter of May 11, 1983. The underground railroad car was also mentioned in the RCRA inspection report of March 15, 1984. A 2,000 gallon creosote-waste water tank for containing spills was reportedly located under the concrete pad near the creosote unloading point. According to facility representatives present during the VSI, the unit never existed on-site.

Recommendation

RFI is not recommended.

7.16 AOC 3 INSTALLATION OF A THIRD TREATMENT CYLINDER (H)

Conclusion

A third treatment cylinder is currently being installed on the site and

has asbestos insulation. The concrete pad in front of the other two treatment cylinders does not extend to the third cylinder. Additionally, there is no concrete sump at the front of the new cylinder to catch any creosote drippings.

Recommendations

RFI is not recommended.

7.17 AOC 4 TRUCK UNLOADING PAD (N)

Conclusion

This is a concrete pad with two small concrete sumps at one end to catch any creosote drippings from the tank trucks unloading at this pad. There was no documented release mentioned in any site inspection report and no visible signs of contamination were observed during the VSI. However, prior to its construction in 1984 the ground was graded and unloading took place on native soil. Spills were not contained and any spills prior to 1984 remained in the area.

Recommendation

RFI is not recommended.

8. REFERENCES

- 1 Climatic Atlas of the United States, U.S. Department of Commerce, 1983.
- Correspondence from John Ball, Ball Engineering Company to Patricia L. Norton, Secretary, LDEQ, Baton Rouge, Louisiana. Re: Drippings on railroad tracks, April 25, 1984.
- 3 Correspondence from Mr. John Koury, Assistant Secretary, LDEQ, Office of Solid and Hazardous Waste to Mr. Clyde Norton, Durawood Treating Company, March 7, 1988, Re: Closure of impoundments.
- 4 Endangered Animals of Louisiana, M. B. Watson, Louisiana Department of Wildlife and Fisheries.
- Flood Insurance Rate Map, City of Alexandria, Rapides Parish, July 17, 1978.
- 6 General Inspection of Durawood, December 17, 1984, by Victor Montelaro and Bill Greenwich, LDEQ-Office of Solid and Hazardous Vaste.
- Generator Compliance Checklist of Durawood by Victor Montelaro, Office of Solid and Hazardous Waste, April 24, 1985.
- B Geology and Ground Water Resources of the Alexandria Area, Rapides Parish, Louisiana, Water Resource Pamplet No. 3, November 1955.
- 9 Ground Water Resources of the Red River Alluvium in Louisiana, Water Resource Pamphlet No. 7, April, 1960.
- Interoffice Correspondence from Joan L. Albritton to Frank L. Dautriel, Enforcement Program Manager, State of Louisiana, Department of Natural Resources, Office of Environmental Affairs. Re: Creosote spillage near underground storage tank, Hay 11, 1983.
- Interoffice Correspondence from Thomas H. Patterson, Enforcement Program Manager, LDEQ, to Glenn A. Miller, Administrator, LDEQ. Re: Management of Drippage from Treated Wood Products, October 27, 1986.
- 12 Louisiana Vater Quality Standards, LDEQ Office of Water Resources, 1984.
- Notice of Violation Issued to Durawood Treating Company by LDEQ, Baton Rouge, Louisiana. Re: Drippings of creosote onto railroad tracks, April 3, 1984.
- Post-Closure Permit Application-Durawood Treating Company, April 8, 1988.

- RCRA Inspection of Durawood, December 1, 1982, by Joan Albritton, Louisiana Department of Natural Resources.
- 16 RCRA Inssection of Durawood, March 15, 1984, by Tom Patterson, LDEQ-Office of Solid and Hazardous Waste.
- 17 RCRA Inspection of Durawood, October 21, 1985 by Victor Montelaro, LDEQ-Office of Solid and Hazardous Waste.
- 18 Record of Communication, May 1, 1988. Water Supply, Miller, Alexandria Water Department and Keith Dias, ICF Technology, Inc.
- 19 Record of Communication, May 6, 1988. Air Quality: Kenneth Johnson, LDEQ and Raymond Wayne, Ecology and Environment, Inc.
- 20 Record of Communication, May 9, 1988. Air Quality: Kenneth Johnson, LDEQ and Keith Dias, ICF Technology, Inc.
- 21 Record of Communication, May 16, 1988. Surface Vater Use, Louis Logue, U.S. Army Corps of Engineers and Keith Dias, ICF Technology, Inc.
- Record of Communication, May 31, 1988. Water Supply, Miller, Alexandria Water Department and Ravinder Joseph, ICF Technology, Inc.
- 23 Record of Communication, June 1, 1988. Surface Water Use, John Banhart, U.S. Army Corps of Engineers and Ravinder Joseph ICF Technology, Inc.
- 24 Record of Communication, June 25, 1988. Air Quality: William Coltrin, LDEQ and Ravinder Joseph, ICF Technology, Inc.
- 25 Soil Survey of Rapides Parish, U.S. Department of Agriculture Soil Conservation Service and Forest Service, March 1980.
- 26 U.S. Geologic Survey, Topographic Map, 7.5 minute, Alexandria Quadrangle, 1979.
- Wood Deterioration and its prevention by Preservative Treatments, Darrel D. Nicholas, Syracuse University press, 1973.

APPENDIX A

VSI PHOTOGRAPHIC LOG

Site Name:

DURAWOOD TREATING CO.

Location:

ALEXANDRIA, LA

TDD Number: F-06-8709-32

CERCLIS: LAD069524981

Photographer: Keith Dias . X

Witness: Ravinder Joseph

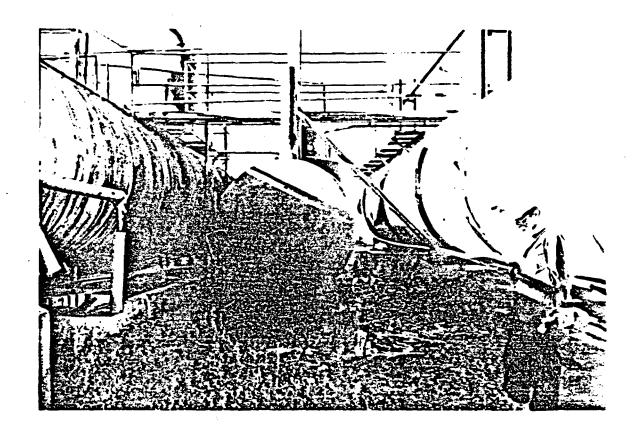
Date: April 06, 1988

Time: 0855 hours

Direction: SW

Comments: Railroad car separator.

(This photograph matches negative number 1)



DURAWOOD TREATING CO. Location: Site Name:

ALEXANDRIA, LA

TDD Number: F-06-8709-32

CERCLIS: LAD069524981

Photographer: Keith Dias

Witness: Ravinder Joseph

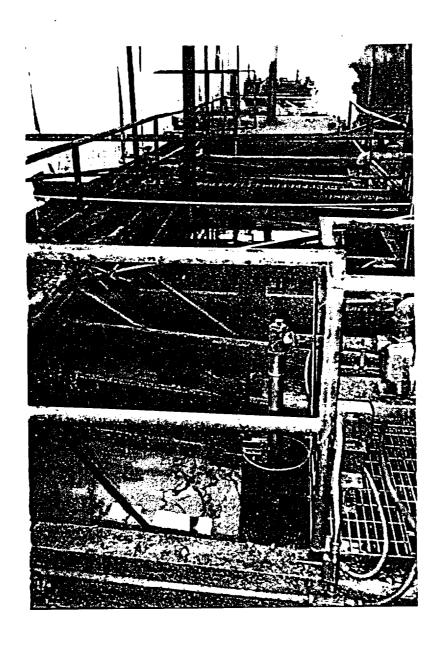
Date: April 06, 1988

Time: 0857 hours

Direction: SW

Comments: Oil/wastewater separator sump

(This photograph matches negative number 2)



Site Name:

DURAWOOD TREATING CO.

Location:

ALEXANDRIA, LA

TDD Number: F-06-8709-32

CERCLIS: LAD069524981

Photographer: Keith Dias

Witness: Ravinder Joseph Rock 548

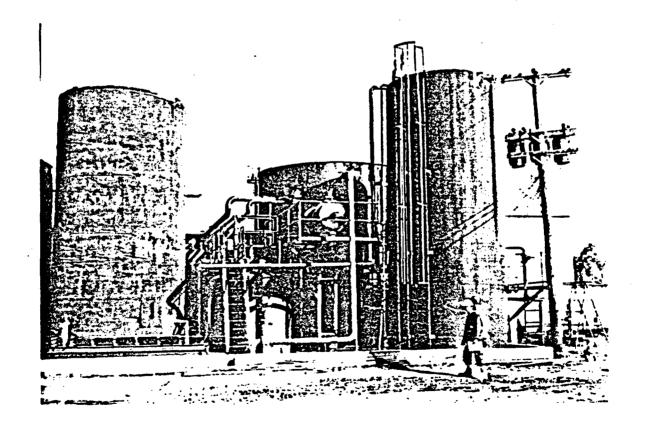
Date: April 06, 1988

Time: 0922 hours

Direction: NW

Comments: Working tankage.

(This photograph matches negative number 10)



Site Name:

DURAWOOD TREATING CO.

Location: .

ALEXANDRIA, LA

TDD Number: F-06-8709-32

CERCLIS: LAD069524981

Photographer: Keith Dias

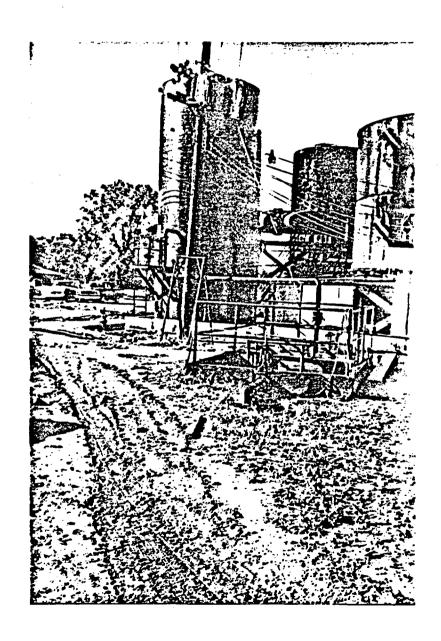
Witness: Ravinder Joseph Realist of A to

. Date: April 06, 1988

Time: 0925 hours

Direction: SW

Comments: Separator with Floc tank in the background. Waste-water leaving this separator enters the city sewer system. (This photograph matches negative number 11)



Site Name: DURAWOOD TREATING CO. Location:

ALEXANDRIA, LA

TDD Number: F-06-8709-32

CERCLIS: LAD069524981

Photographer: Keith Dias

Witness: Ravinder Joseph San 185

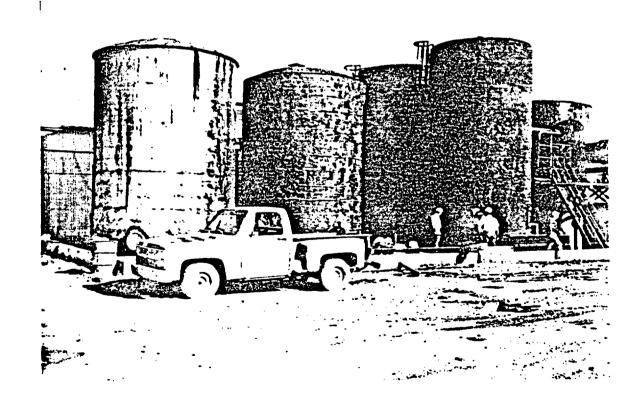
- Date: April 06, 1988

Time: 0927 hours

Direction: NW

Comments: Working tankage area facing NW.

(This photograph matches negative number 12)



Site Name:

DURAWOOD TREATING CO.

Location:

ALEXANDRIA, LA

TDD Number: F-06-8709-32

CERCLIS: LAD069524981

Photographer: Keith Dias

Witness: Ravinder Joseph Acade 3.45

. Date: April 06, 1988

Time: 0945 hours

Direction: NE

Comments: View of concrete drip pads for tram cars exiting the

treatment cylinders.

(This photograph matches negative number 17)



Site Name:

DURAWOOD TREATING CO.

Location:

ALEXANDRIA, LA

TDD Number: F-06-8709-32

CERCLIS: LAD069524981

Photographer: Keith Dias

Witness: Ravinder Joseph 2.10 7/2

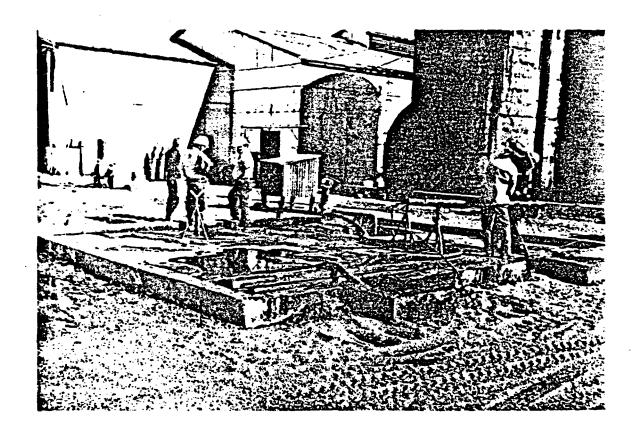
. Date: April 06, 1988

Time: 0952 hours

Direction: NW

Comments: Tank truck unloading area.

(This photograph matches negative number 20)



Site Name:

DURAWOOD TREATING CO.

Location:

ALEXANDRIA, LA

TDD Number: F-06-8709-32

CERCLIS: LAD069524981

Photographer: Keith Dias

Witness: Ravinder Joseph Production

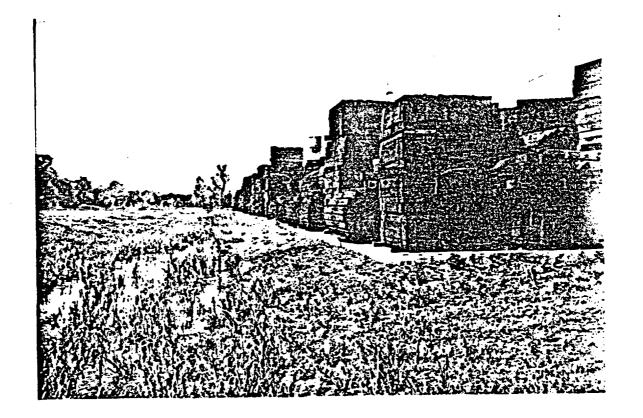
. Date: April 06, 1988 Time: 1000 hours

Direction: SW

Comments: View of concrete drying/storage pad with drainage ditch

running alongside.

(This photograph matches negative number 21)



Site Name:

DURAWOOD TREATING CO.

Location:

ALEXANDRIA, LA

TDD Number: F-06-8709-32

CERCLIS: LAD069524981

Witness: Ravinder Joseph Ravies &

Photographer: Keith Dias

. Date: April 06, 1988

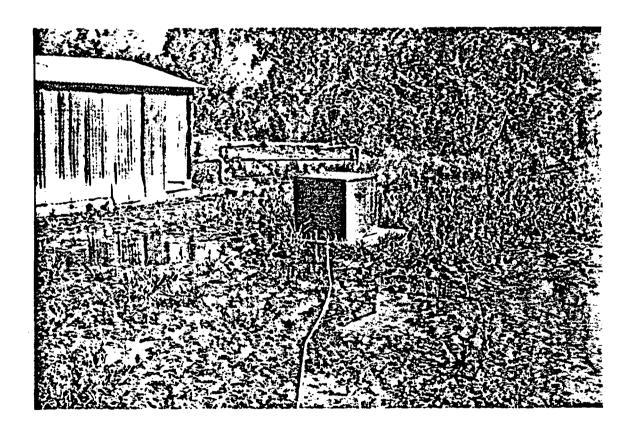
Time: 1020 hours

Direction: NW

Comments: Peristaltic pump housing with pipe running to separator in

front of Floc tank.

(This photograph matches negative number 22)



Site Name:

DURAWOOD TREATING CO.

Location:

ALEXANDRIA, LA

TDD Number: F-06-8709-32

CERCLIS: LAD069524981

Photographer: Keith Dias

Witness: Ravinder Joseph $\mathcal{R}_{co}(0) = 5 \cdot I^{\frac{c_{c}}{c_{c}}}$

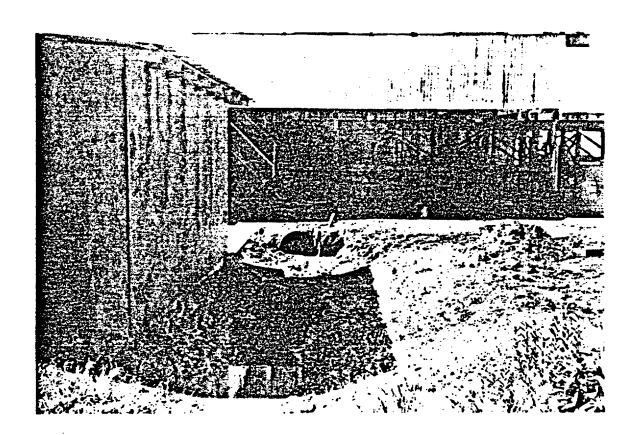
Date: April 06, 1988

Time: 1115 hours

Direction: SW

Comments: View of ditch going underground close to the mechanics shop.

(This photograph matches negative number 23)



Site Name: **DURAWOOD TREATING CO.** Location:

ALEXANDRIA, LA

TDD Number: F-06-8709-32

CERCLIS: LAD069524981

Photographer: Keith Dias

Witness: Ravinder Joseph Park 10 1994

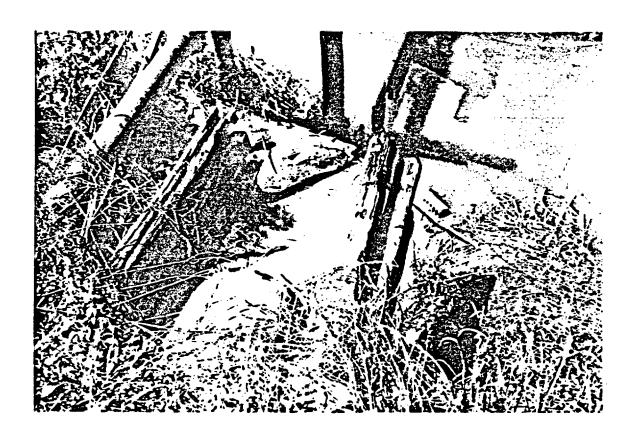
Date: April 06, 1988

Time: 1123 hours

Direction: SW

Comments: Outlet of drainage ditch in photograph 10 into Hynson Bayou.

(This photograph matches negative number 24)



Site Name:

DURAWOOD TREATING CO.

Location:

ALEXANDRIA, LA

TDD Number: F-06-8709-32

CERCLIS: LAD069524981

Photographer: Keith Dias

Witness: Ravinder Joseph Reals 1996

Date: April 06, 1988

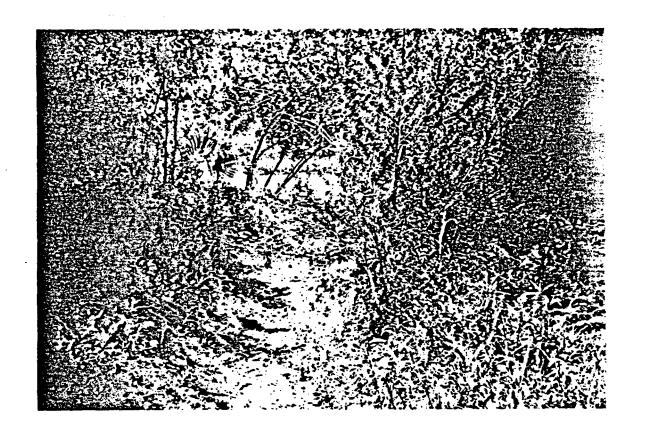
Time: 1150 hours

Direction: E

Comments: Confluence of ditches running alongside old Chatlin Lake

impoundment.

(This photograph matches negative number 31)



Site Name:

DURAWOOD TREATING CO.

Location:

ALEXANDRIA, LA

TDD Number: F-06-8709-32

CERCLIS: LAD069524981

Photographer: Keith Dias

Witness: Ravinder Joseph And July

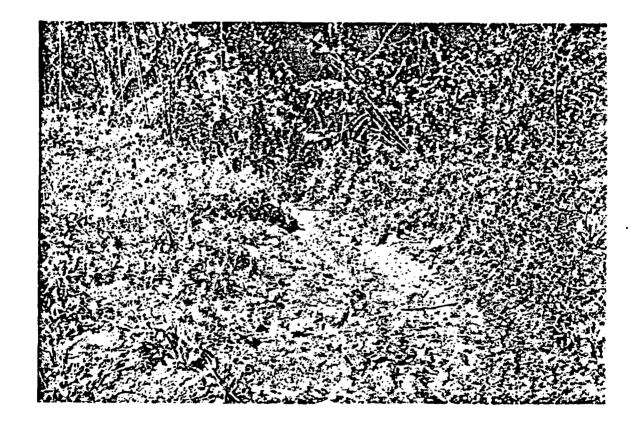
Date: April 06, 1988

Time: 1207 hours

Direction: W

Comments: Ditch entering property from woods to the west.

(This photograph matches negative number 32)



Site Name:

DURAWOOD TREATING CO.

Location:

ALEXANDRIA, LA

TDD Number: F-06-8709-32

CERCLIS: LAD069524981

Photographer: Keith Dias

Witness: Ravinder Joseph Carlo Cole

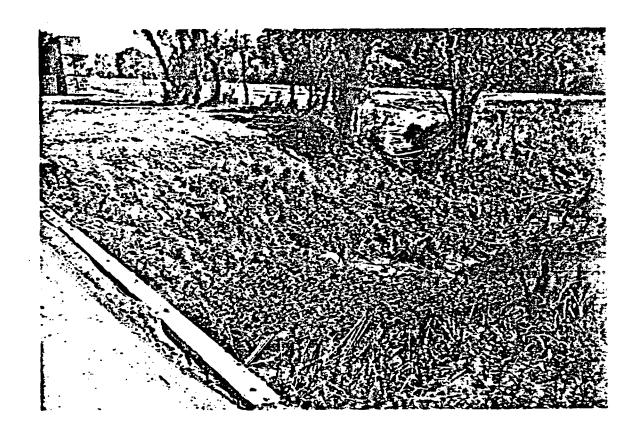
Date: April 06, 1988

Time:

1240 hours

Direction: NE

Comments: Intersection of drainage ditch running alongside concrete drying/storage pad with Hynson Bayou at south end of site. (This photograph matches negative number 38)



Site Name:

DURAWOOD TREATING CO.

Location:

ALEXANDRIA, LA

TDD Number: F-06-8709-32

CERCLIS: LAD069524981

Photographer: Keith Dias -

Witness: Ravinder Joseph Saide Jugar

Date: April 06,1988

Time: 0907 hours

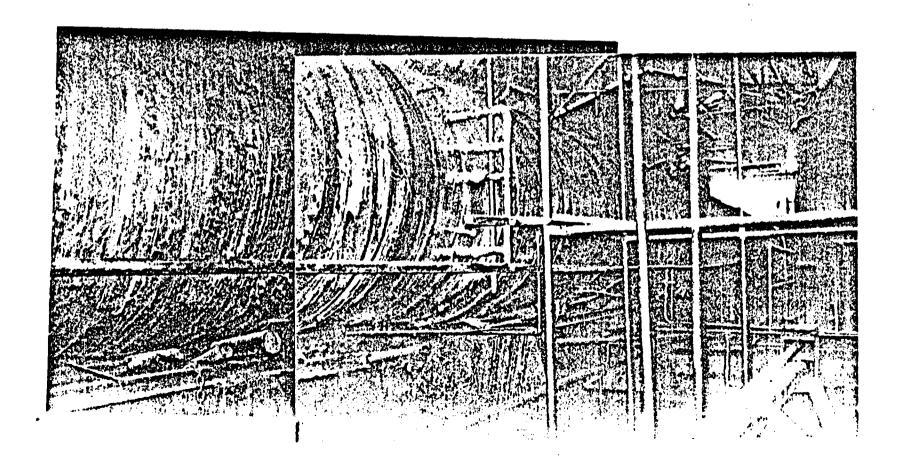
Direction:

S

Comments: This is a panoramic view of the separator located inside the

treatment building.

(This photograph matches negative numbers 4&5)



Site Name:

DURAWOOD TREATING CO.

Location:

ALEXANDRIA, LA

TDD Number: F-06-8709-32

CERCLIS: LAD069524981

Photographer: Keith Dias

Witness: Ravinder Joseph Rach Way Co

Date: April 06,1988

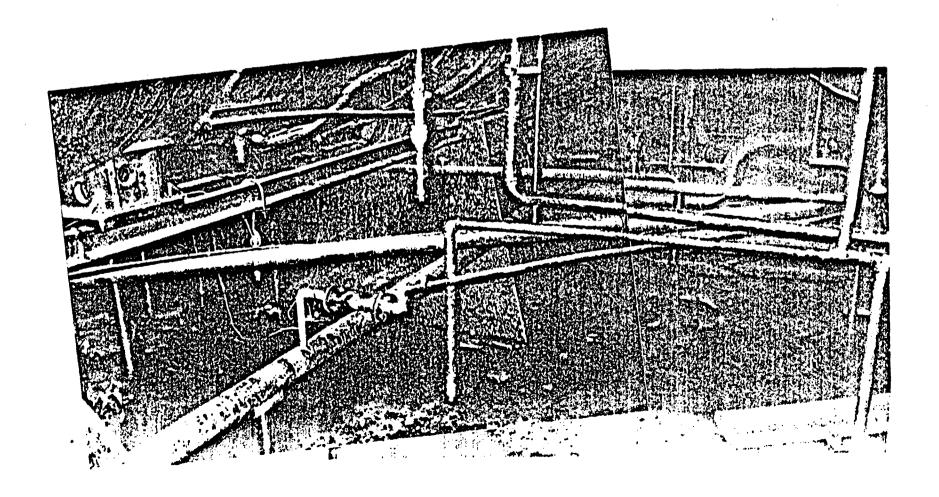
Time: 0912 hours

Direction: SW

Comments: This is a panoramic view of the main sump located inside

the treatment building.

(This photograph matches negative numbers 6&7)



Site Name:

DURAWOOD TREATING CO.

Location:

ALEXANDRIA, LA

TDD Number: F-06-8709-32

CERCLIS: LAD069524981

NE

Photographer: Keith Dias

Witness: Ravinder Joseph Randa Jofs

Date: April 06,1983

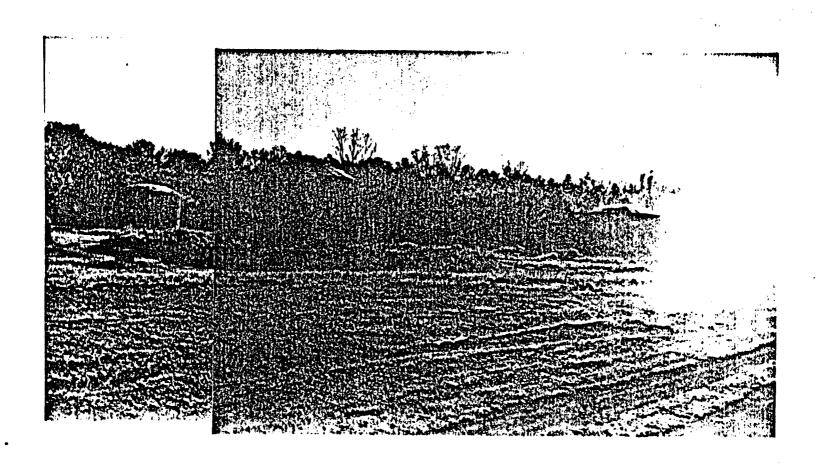
Time: 0919 hours

Direction:

Comments: Fuel oil/creosote tanks located in a field in the NE corner

of the facility.

(This photograph matches negative numbers 8&9)



Site Name:

DURAWOOD TREATING CO.

Location:

ALEXANDRIA, LA

TDD Number: F-06-8709-32

CERCLIS: LAD069524981

Photographer: Keith Dias

Witness: Ravinder Joseph Pulle Tyles

Date: April 06,1988

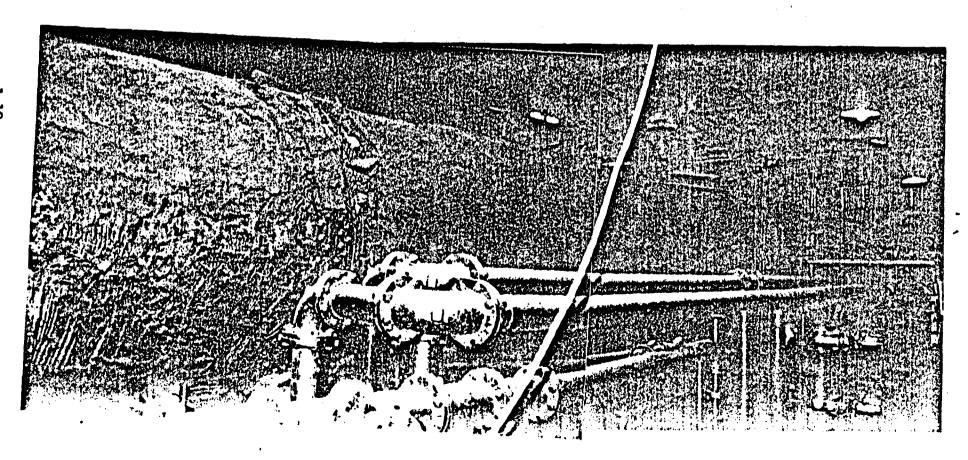
Time: 0930 hours

Direction: NNW

Comments: Treatment cylinder located inside the main treatment

building.

(This photograph matches negative numbers 13&14)



Site Name:

DURAWOOD TREATING CO.

Location:

ALEXANDRIA, LA

TDD Number: F-06-8709-32

CERCLIS: LAD069524981

Photographer: Keith Dias Yalldan

Witness: Ravinder Joseph Rank Jages

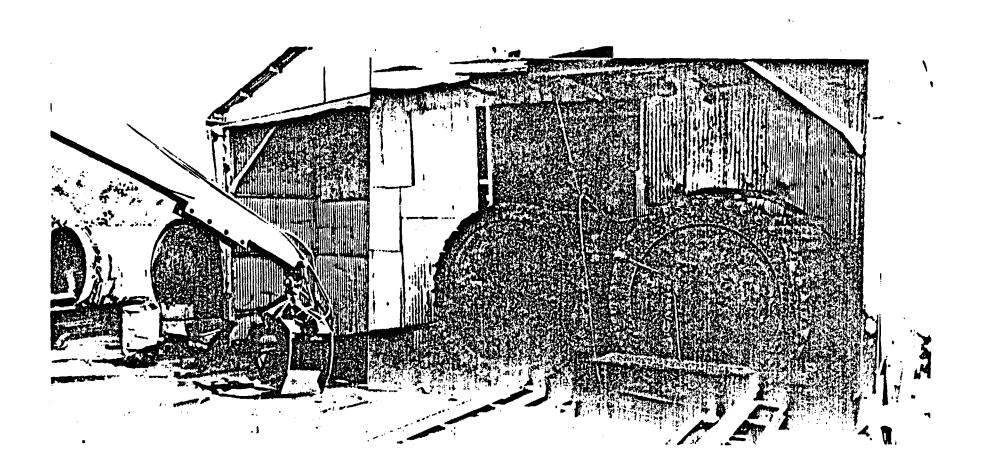
Date: April 06, 1988

Time: 0940 hours

Direction:

Comments: Treatment cylinders and separator(second from right). Note concrete sumps for treatment cylinders in the foreground.

(This photograph matches negative number 15&16)



Site Name:

DURAWOOD TREATING CO.

Location:

ALEXANDRIA, LA

TDD Number: F-06-8709-32

CERCLIS: LAD069524981

Photographer: Keith Dias

Witness: Ravinder Joseph Reads. July

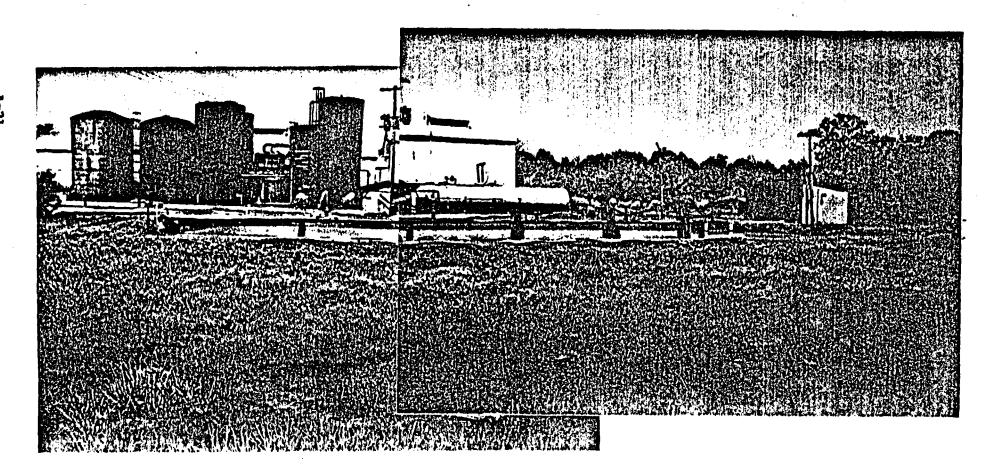
Date: April 06,1988

Time: 1138 hours

Direction:

Comments: Cooling pond with the working tankage in the background.

(This photograph matches negative numbers 24&25)



Site Name:

DURAWOOD TREATING CO.

Location:

ALEXANDRIA, LA

TDD Number: F-06-8709-32

CERCLIS: LAD069524981

Photographer: Keith Dias

Witness: Ravinder Joseph Built Types

Date: April 06,1988

Time: 1140 hours

Direction: SE-NE

Comments: Filled-in Chatlin Lake impoundment. This is part of a complete panorama along with photograph number 22. (This photograph matches negative numbers 26,27&28)



Site Name:

DURAWOOD TREATING CO.

Location:

ALEXANDRIA, LA

TDD Number: F-06-8709-32

CERCLIS: LAD069524981

Photographer: Keith Dias

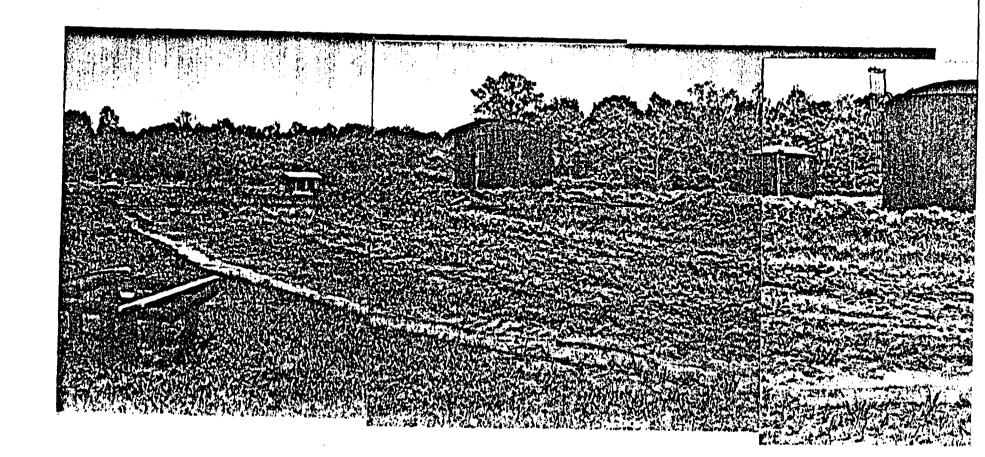
Witness: Ravinder Joseph Render Types

Date: April 06,1988

Time: 1140 hours

Direction: NE-NW

Comments: Filled-in Chatlin Lake impoundment. This is part of a complete panorama along with photograph number 21. (This photograph matches negative numbers 28,29&30)



Site Name:

DURAWOOD TREATING CO.

Location:

ALEXANDRIA, LA

TDD Number: F-06-8709-32

CERCLIS: LAD069524981

Photographer: Keith Dias

Witness: Ravinder Joseph Parter July 5

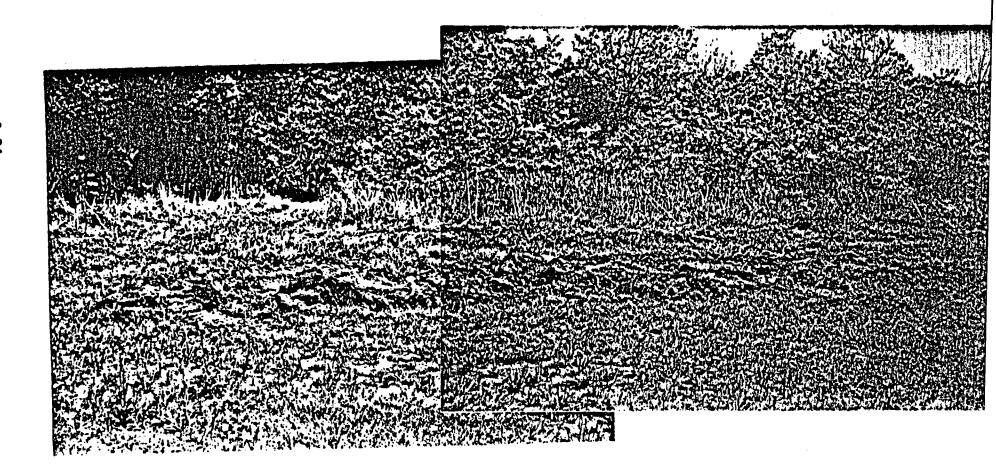
Date: April 06,1988

Time: 1208 hours

Direction: N-NE

Comments: Filled-in Vuccum Pump Cooling Pond. This is part of a complete panorama along with photograph number 24.

(This photograph matches negative numbers 33&34)



Site Name:

DURAWOOD TREATING CO.

Location:

ALEXANDRIA, LA

TDD Number: F-06-8709-32

CERCLIS: LAD069524981

Photographer: Keith Dias

Witness: Ravinder Joseph Render Joy

Date: April 06,1988

Time: 1208 hours

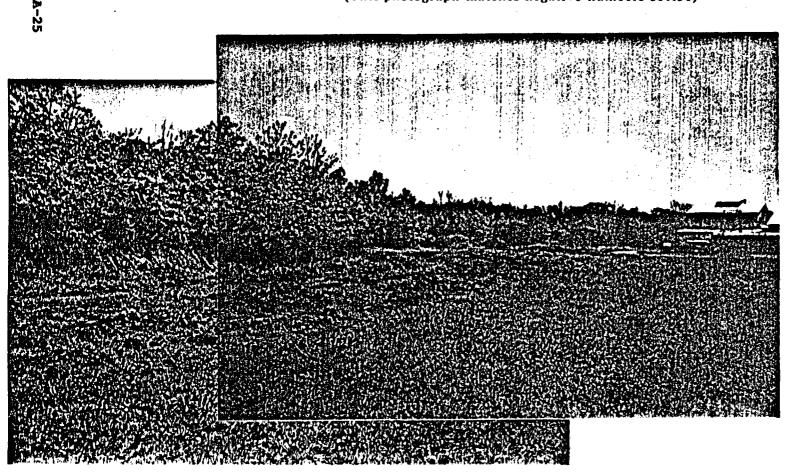
Direction:

NE

Comments: Filled-in Vuccum Pump Cooling Pond. This is part of a

complete panorama along with photograph number 23.

(This photograph matches negative numbers 35&36)



APPENDIX B

RECORD OF COMMUNICATION

	1	, , _,	1-1 -1 -1 - 1
COMMINICATION	X Phone Call	_ Discussio	n Field Trip
	Conference	_ Other (Sp	ecify) REFERENCE 20
·		of Item Checked	
IO: <u>Kenneth Johnson</u>	FROM: Keith Dias		DATE5/9/88
IADEQ Office of Air Quality	ICF - FIT		1515 hrs.
(318) 491-8082			1313 1113.
SUBJECT Air Quality	- Alexandria, IA		
SUMMARY OF COMMUNICATION		 	
Mr. Johnson informed th	e FTT that the air o	ality date for i	Alexandria are the same a
those for Pineville. H	<u>e also mentioned that</u>	: the prevailing	winds were from the sout
and that this helped ma	intain the high quali	ty of air in the	e area since there were
no major industries son	th of Alammiria		
no major industries sou	ui oi miexanuria.		
		\Box	Ceth live
			05/09/88
CONCIUSIONS, ACTION TAKE	N OR REQUIRED		
CONCLUSIONS, ACTION TAKE	n or required		
CONCLUSIONS, ACTION TAKE	N OR REQUIRED		
CONCIUSIONS, ACTION TAKE	N OR REQUIRED		
CONCIUSIONS, ACTION TAKE	N OR REQUIRED		
CONCLUSIONS, ACTION TAKE	N OR REQUIRED		
CONCLUSIONS, ACTION TAKE	N OR REQUIRED		
CONCIUSIONS, ACTION TAKE	N OR REQUIRED		
CONCIUSIONS, ACTION TAKE	N OR REQUIRED		
CONCIUSIONS, ACTION TAKE	N OR REQUIRED		
CONCIUSIONS, ACTION TAKE	N OR REQUIRED		
CONCIUSIONS, ACTION TAKE	N OR REQUIRED		
CONCIUSIONS, ACTION TAKE	N OR REQUIRED		
CONCIUSIONS, ACTION TAKE	N OR REQUIRED		
CONCIUSIONS, ACTION TAKE	N OR REQUIRED		
CONCLUSIONS, ACTION TAKE	N OR REQUIRED		
CONCIUSIONS, ACTION TAKE	N CR REQUIRED		
	N OR REQUIRED		

′ B-1

REFERENCE 19

V Telephone	
Direct CONVERS	ATÍON RECORD
Other:	
Conversation with:	Date 5 6 88
Name Kenneth Johnson	Time 8:20 AM/PM
Company Office of Air Quality and	
Address Nuclear Energy, Lauisiana Dept.	☑ Originator Placed Call
ct Environmental Quality, Lake Charles	Originator Received Call
Phone <u>Louisiano</u> (315) 491-2082	
Subject Colfax Creasating Company	RFA (LADOO 8184616)
Notes: - The background air go	nolity in the Pineville, LA.
area is good to excellent	(the gir quality is at ur
below all ambient air stand	ards).
- Total Suspended Particles u	
International Paper (IP) facility	x (they make kraft paper)
and they met air standard	's, The IP facility is in
the Pineville avea.	
- Hydrocarbons were monitored	at about 20 locations
in the Pineville gree in D	ecember, 1987. The gir
guality was good (very low	
met all standards.	
	tr in three years. A driver
- One complaint about facili travelling on the Expression	av (State Route 28) Venmplained
about a creosote smell (approximately 3pm). Treated
wood is stored honeath	the overpass.
·	
	Follow to Action
☐ Tickle File//	Follow-Up-Action:
☐ Follow-Up By:	
□ Copy/Route To:	
· · · · · · · · · · · · · · · · · · ·	R W
	Originator's Initials 1

	X Phone Call Discussion Field Trip
	(Record of Item Checked Above)
TO:	FROM: DATE
Ravinder Joseph	William Coltrin6/25/88
ICF Technology	Regional program Coordinator TIME
Paide Jel	South Regional Office 1540 hrs. Louisiana Dept. of Environ. Quality
SUBJECT Durawood Trea	ating Company - Air Quality
SUMMARY OF COMMUNICATION	N
Mr. Coltrin said that t	the last inspection at Durawood was done on May 6, 1987 by
Kenneth Johnson, a supe	ervisor for the department. He said that facility was
in compliance with appl	licable air quality standards. He also said that the air
quality in Alexandria,	IA was good and that it was an attainment area.
· · · · · · · · · · · · · · · · · · ·	THE ORD PROGRAMME
CONCLUSIONS, ACTION TAKE	en or required
	······································
	·
	
	·
INFORMATION COPIES	

COMMINICATION	X Phone Call	_ Discussio	n _ Field Trip
	Conference	 Other (Sp	ecify) REFERENCE 18
	,—,		
		Item Checked	
TO: Mr. Miller	FROM: <u>Keith Dias</u>		DATE5/1/88
Alexandria Water Dept. (318) 473-1261	ICF - FIT		TIME 1051 hrs.
SUBJECT			
SUMMARY OF COMMUNICATION	For City Of Alexandria		
Mr. Miller informed the	FTT that Alexandria go	t all its wate	r for municipal supply
from ground water source		•	
from 900-1000 feet and 1			
water in the area was us			
		\rightarrow	Lettles '
			05/01/88
		· · · · · · · · · · · · · · · · · · ·	
		•	
CONCLUSIONS, ACTION TAKE	N OR REQUIRED	· · · · · · · · · · · · · · · · · · ·	
CONCLUSIONS, ACITON TAKE	N OR REQUIRED		
CONCLUSIONS, ACTION TAKE	N OR REQUIRED		
CONCLUSIONS, ACTION TAKE	N OR REQUIRED		
CONCLUSIONS, ACTION TAKE	N OR REQUIRED		·
CONCLUSIONS, ACTION TAKE	N OR REQUIRED		
CONCLUSIONS, ACTION TAKE	N OR REQUIRED		
CONCLUSIONS, ACTION TAKE	N OR REQUIRED		
CONCLUSIONS, ACTION TAKE	N OR REQUIRED		
CONCLUSIONS, ACTION TAKE	N OR REQUIRED		
CONCLUSIONS, ACTION TAKE	N OR REQUIRED		
INFORMATION COPIES TO:	N OR REQUIRED		

RECORD OF COMMUNICATION	X Phone Call Disc	ussion Field Trip
	Conference Othe	r (Specify) REFERENCE 21
	(Daniel of The day	along the second
TO: (601) 634-5000	(Record of Item Che	DATE
<u> Louis Loque</u>	Keith Dias	
U.S. Army Corps of Engineers	ICF - FIT	TIME 1043 hrs.
Vicksburg District	<u> </u>	2013 1251
	eiving Body For Surface Water Fro	m Chatlin Iake Canal
SUMMARY OF COMMUNICATION	[
Mr. Loque of the Naviga	tion Branch of the Corps. of Eng	ineers' Vicksburg District
informed me that to the	best of his knowledge and from	consulting his maps, there
were no streams, channe	els or canals entering the Red Ri	ver in Rapides or Avoyelles
parishes. He said that	the Chatlin Lake Canal flowed s	outh until it reached the Bayo
Des Glaises diversion o	hannel from which it flowed into	the swamps that comprised
the Bayou Tech - Vermil	lion River Basins.	
	· 	
	· · · · · · · · · · · · · · · · · · ·	Xattleas .
	•	05/16/88
CONCLUSIONS, ACTION TAKE	N OR REQUIRED	
· · · · · · · · · · · · · · · · · · ·		
		
INFORMATION COPIES		
TO:		

B-5

RECORD OF COMMUNICATION	<u>X</u> I	hone Call	ı <u></u>	Discussion	on <u> </u>	Field Trip
	<u> </u>	onference	<u> </u>	Other (S	pecify)	REFERENCE 23
		/Poormi	of Ite	m Checked	Abostol	
D: Quil-J.49	FROM:	TRECOLU	or re	in Checken	DATE	
Ravinder Joseph		ohn Banhar	+		22111	6/1/88
ICF Technology - FIT		orps. Of I			TIME	0/ 1/ 00
		lexandria,		_		1500 hrs.
		318) 473-9				
UBJECT					•	
Chatlin La	ike And Hyn	son Bayou				
UMMARY OF COMMUNICATION						
Mr. Banhart said that bo	oth Chatlir	Lake and	Hynson	Bayou dr	ain the (City of Alexandria
and that he was not awar	ne of these	rivers be	eing us	ed for in	rigation.	In reality he
said that both of the ab	ove were r	ot navigab	ole. H	e also sa	id that l	nas not seen any
fishing activities in th						
full of fish. He also s		•				
not used for anything.						
ONCLUSIONS, ACTION TAKEN	OR REQUIE	E D				
			· · ·		`	
	<u> </u>			· · · · · · · · · · · · · · · · · · ·		
						<u></u>
INFORMATION COPIES						,
PA FORM 1300-6 (7-72)						

RECORD OF COMMUNICATION	X Phone Call Discussion Field Trip
	Conference Other (Specify)
	(Record of Item Checked Above)
TO: Mr. Miller	FROM: DATE 5/31/88
Alexandria Water Dept. (318) 473-1261	ICF - FIT Porto July TIME 1500 hrs.
	ater Use
SUMMARY OF COMMUNICATION	
Mr. Miller confirmed the	at there were municipal drinking water wells within one mile
of Durawood. They drew	from two aquifers: One at 900'-1000' and the other at
2000'. The city water	distribution system extends to all areas within a three mile
mile radius of site. Wa	ater is available even at 10' but the quality and quantity of
of water are not suitab	le for drinking. Most of the domestic wells are roughly
90' deep and are no long	ger in use. Even if they are used, he does not think that
they would be used as d	rinking water.
CONCLUSIONS, ACTION TAKE	V OR REQUIRED
	-
	·
	
INFORMATION COPIES TO:	
EPA FORM 1300-6 (7-72) Replaces EPA HQ Form 530	0-3 Which May Be Used Until Supply is Exhausted.

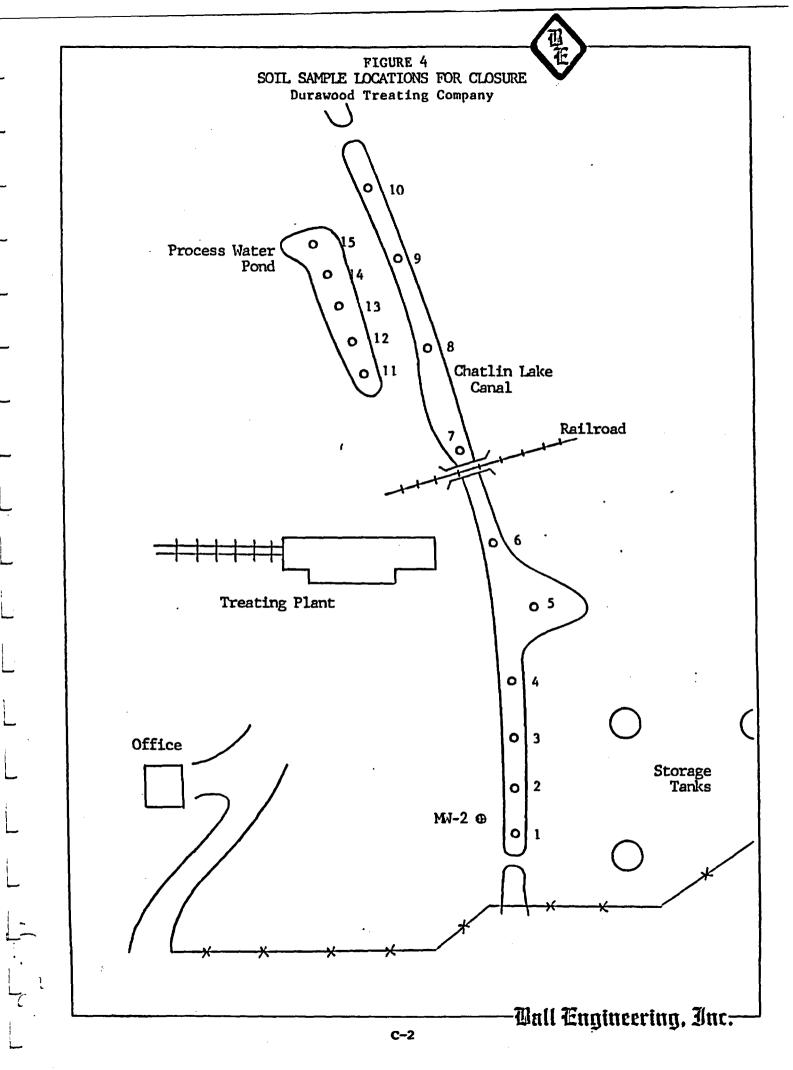
B-7

APPENDIX C

SELECTED REFERENCES

Surface Soil Sample Locations and Sampling Results	C-1
Soil Boring Locations and Sampling Results	C-7
Soil Boring Logs	C-11
Monitoring Well Logs and Locations	C-25
Monitoring Well Sampling Results	C-48
Summary of Monitoring Well Sampling Analysis	C-75
Waste Water Discharge Sampling Results	C-76

SURFACE SOIL SAMPLING LOCATIONS AND SAMPLING RESULTS



Janette M. Davis Vice-President

Savannah Laboratories and environmental services, inc.

P. O. Box 13842 • Savannah, GA 31416-0842 Whitfield Avenue at Shipyard Road (31406) (912) 354-7858

LOG NO: 86-0558

Received: 13 MAR 86

Dr. John Ball Bull Engineering Company P. O. Box JB, University of Alabama Tuscaloosa, AL 35486

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION , SUIL SAMPLES (ED EXALUHION)		
- 0558-2 0558-3	86-79 DTC Soll Ditch-1 86-80 DTC Soll Ditch-2	ultun	LHEB CAN	AC
- PARAMETER		0558-2	共2 0558-3	
K001-Append	lix 7 Parameters *			,
_ 2Chloropl	ienol, mg/l	<0.01	<0.01	
Phenol, mg	<u>;/l</u>	<0.01	<0.01	
.4-Dimetl	ylphenol, mg/l.	<0.01	<0.01.	
2,4,6-7ri	chlorophenol, mg/l	<0.01	<0.01	
p-Chloro-	m-cresol, mg/l	. <0.01	0,13	
Tetrachlo	rophenol, mg/l	<0.02	0.2	
	rophenol, mg/l	<0.03	<0.03	
Pentachlo	rophenol, mg/l	0.01	0.07	
Naphthale	ne, mg/l	<0.01	4.1	
Acenaphth	cne, mg/l	0.34	1.1	
_ Phenanthr	ene + Authracene, mg/l	2.0	6.5	•
Fluoranth	ene, mg/l	, 0.1 9	0.76	
Chrysene	+ Benz(a)anthracene, mg/l	0.05	0.07	
Benzo(b,k	:)fluoranthene, my/l	<0.03	0.07	
	yrene, mg/l	<0.02	0.04	•
Ideno(1,2	2,3-cd)pyrene + Dibenzo(a,h)anthracene	e, mg/l <0.03	<0.03	
Carbazole		<0.01	0.50	

Methods: EPA SW-846

J. W. Andrews, Ph. D.

^{*} Results are on EP Tox Extracts at pH 6.5.

Janette M. Davis Vice-President

SAVANNAH LABORATORIES AND ENVIRONMENTAL SERVICES, INC.



P. O. Box 13842 • Savannah, GA 31416-0842 Whitfield Avenue at Shipyard Road (31406) (912) 354-7858

LOG NO: 86-0947

Received: 24 APR 86

Dr. John Ball
Ball Engineering Company
P. O. Box JB, University of Alabama
Tuscaloosa, AL 35486

REPORT OF ANALYTICAL RESULTS

LOG NO SAMPLE DESCRIPTION ,	WATER SAMI	ples on Ep	EXTRACT	70N OF 50	
0947-1 Chatlin Lake Canal Lo					
0947-2 Chatlin Lake Canal Lo					
└ 0947-3 Chatlin Lake Canal Lo	ocat #5 (8)	6-160)			
0947-4 Chatlin Lake Canal Lo	cation #6	(86-161)			
0947-5 Chatlin Lake Canal L	cation #7				•
	-		• •	NHK-CON	_
PARAMETER	0947-1	0947-2	0947-3	0947-4	0947-5
	#3-	#	#-5		
NUO1-Appendix 7 Parameters	43	•		0	/
2-Chlorophenol, mg/l	<0.01	<0.01	<0.01	<0.01	<0.01
Phenol, mg/l	<0.01	0.03	<0.01	<0.01	<0.01
2,4-Dimethylphenol, mg/l	<0.01	0.02	0.01	<0.01	<0.01
2,4,6-Trichlorophenol, mg/l	<0.01	<0.01	<0.01	<0.01	<0.01
p-Chloro-m-cresol, mg/l	<0.01	<0.01	<0.01	<0.01	<0.01
Tetrachlorophenol, mg/l	<0.02	<0.02	<0.01	<0.02	<0.02
2,4-Dinitrophenol, mg/l	<0.03	<0.03	<0.03	<0.03	<0.03
Pentachlorophenol, mg/l	0.03	0.07	0.12	<0.01	0.21
Naphthalene, mg/l	0.01	0.09	0.01	<0.01	0.01
Acenaphthene, mg/l	0.34	0.26	ð.82	<0.01	0.64
- Phenanthrene + Anthracene, mg/l	0.06	0.72	0.92	<0.02	0.79
Fluoranthene, mg/l	0.12	0.05	0.08	0.02	0.06
Chrysene +	<0.03	<0.03	<0.03	<0.03	0.03
Benz(a)anthracene, mg/l	15105				-
Benzo(b,k)fluoranthene, mg/l	<0.03	<0.03	<0.03	<0.03	<0.03
Benzo(a)Pyrene, mg/l	<0.02	<0.02	<0.02	<0.02	<0.02
Ideno(1,2,3-cd)pyrene +	<0.03	<0.03	<0.03	<0.03	<0.03
Dibenzo(a,h)anthracene, mg/l	13100		13,00	.3,00	10,00
· Carbazole, mg/l	<0.01	0.13	<0.01	<0.01	<0.01

Hethods: "Test Methods for the Evaluation of Solid Waste" SW-846 (2nd Edition) EPA 8100 and 8040 (Varian Model 3700 GC)

Janette M. Davis
Vice-President

SAVANNAH LABORATORIES AND ENVIRONMENTAL SERVICES, INC.



P. O. Box 13842 • Savannah, GA 31416-0842 Whitfield Avenue at Shipyard Road (31406) (912) 354-7858

LOG NO: 86-0947

Received: 24 APR 86

Dr. John Ball
Ball Engineering Company
P. O. Box JB, University of Alabama
Tuscaloosa, AL 35486

REPORT OF ANALYTICAL RESULTS

	LOG NO	SAMPLE DESCRIPTION ,	WATER SAMP	LES ON E	is eximinat	ion of s	٥/ـ
	0947-6	Chatlin Lake Canal Lo	cation #8	(86-163)			
	0947-7	Chatlin Lake Canal Lo	cation #9	(86-164)			
	0947-8	Chatlin Lake Canal Lo	cat #10 (8	6-165)			
_	0947-9	Vacuum Pump Cooling f	ond #11 (8	6-166)			
	0947-10	Vacuum Pump Cooling I	ond #12 (8	6-167)	t.	_	
			YATLING LAI	4ZBINGG	·	_	Liag Perd
_	PARAMETER	·	0947-6	0947-7	0947-8	0947-9	0947-10
	'901-Appen	dix 7 Parameters	#- 	#	#10	#-7/	#-12_
		henol, mg/l	<0.01	<0.01	<0.01	<0.01	<0.01
_	Phenol, m		<0.01	<0.01	<0.01	0.04	3.4
	•	hylphenol, mg/l	0.04	<0.01	<0.01	<0.01	<0.01
	2,4,6-Tri	chlorophenol, mg/l	<0.01	<0.01	<0.01	<0.01	<0.01
_		m-cresol, mg/l	<0.01	<0.01	<0.01	<0.01	0.03
		rophenol, mg/l	<0.02	<0.02	<0.02	<0.02	0.13
	2,4-Dinit	rophenol, mg/l	<0.03	<0.03	<0.03	<0.03	<0.03
	Pentachlo	rophenol, mg/l	0.10	0.08	0.04	0.13	0.08
_	Naphthale		2.8	0.01	0.01	8.1	-11
	Acenaphth	ene, mg/l	0.28	0.16	b.18	0.47	0.42
	Phenanthr	ene + Anthracene, mg/l	1.0	0.45	0.28	0.46	1.0
_		ene, mg/l	0.09	0.08	0.50	0.03	0.07
	Chrysene		<0.03	<0.03	0.03	<0.03	<0.03
i		inthracene, mg/l					
L		c)fluoranthene, mg/l	<0.03	<0.03	<0.03	<0.03	<0.03
		Pyrene, mg/l	<0.02	<0.02	<0.02	<0.02	<0.02
!		2,3-cd)pyrene +	<0.03	<0.03	<0.03	<0.03	<0.03
	Dibenzo	(a,h)anthracene,-mg/l					
-	Carbazole	e, mg/l	0.12	0.06	<0.01	<0.01	0.71

Methods: "Test Methods for the Evaluation of Solid Waste" SW-846 (2nd Edition) ΕΡΛ 8100 and 8040 (Varian Model 3700 GC)

Janette M. Davis Vice-President

SAVANNAH LABORATORIES AND ENVIRONMENTAL SERVICES, INC.



P. O. Box 13842 • Savannah, GA 31416-0842 Whitfield Avenue at Shipyard Road (31406) (912) 354-7858

LOG NO: 86-0947

Received: 24 APR 86

Dr. John Ball
Ball Engineering Company
P. O. Box JB, University of Alabama
Tuscaloosa, AL 35486

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION , WATER SAMPLES ON EF	TEXTRAC	7/02 AF	201
0947-11 0947-12	Vacuum Pump Cooling Pond #13 (86-168) Vacuum Pump Cooling Pond #14 (86-169)			
0947-13	Vacuum Pump Cooling Pond #15 (86-170)	Ox	was PON	D
PARAMETER		0947-11	0947-12	
KOO1-Append	iix 7 Parameters	13	#-74	#15
	nenol, mg/l	<0.01	<0.01	<0.01
Phenol, mg		1.5	1.9	0.04
	hylphenol, mg/l	0.24	0.67	<0.01
2,4,6-Trie	chlorophenol, mg/l	0.04	0.13	<0.01
p-Chloro-	m-cresol, mg/l	<0.01	<0.01	<0.01
Tetrachlo	rophenol, mg/l	<0.02	<0.02	<0.02
2,4-Dinit	rophenol, mg/l	<0.03	<0.03	<0.03
	rophenol, mg/l	0.13	0.12	0.17
Naphthale	ne, mg/l	7.5	8.4	<0.01
Acenaphth		0.55	0.44	0.80
	ene + Anthracene, mg/l	0.82	0.79	1.4
Fluoranth		<0.02	0.04	0.08
	+ Benz(a)anthracene, mg/l	<0.03	<0.03	<0.03
)fluoranthene, mg/l	<0.03	<0.03	<0.03
	yrene, mg/l	<0.02	<0.02	<0.02
	,3-cd)pyrene + Dibenzo(a,h)anthracene, mg/l	<0.03	<0.03	<0.03
Carbazole	, mg/l	0.17	0.53	0.07

Methods: "Test Methods for the Evaluation of Solid Waste" SW-846-(2nd Edition) EPA 8100 and 8040 (Varian Model 3700 GC)

J. W. andraw

1. W. Andrews, Ph. D.

SOIL BORING LOCATIONS AND SAMPLING RESULTS

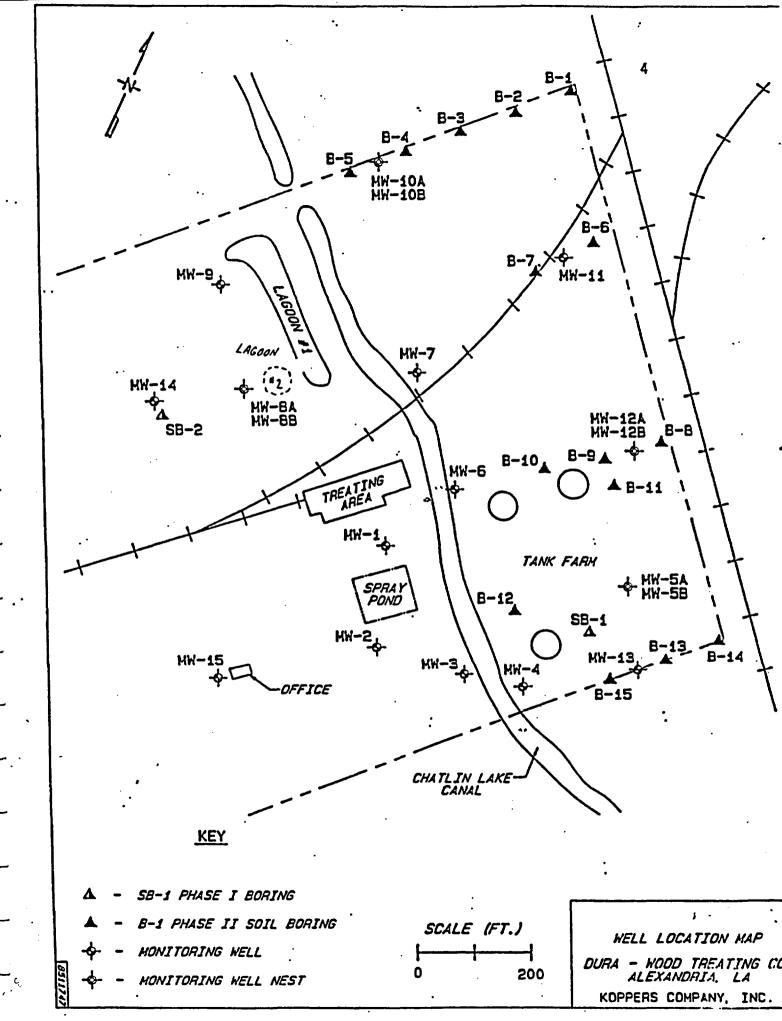


TABLE 1

KOPPERS COMPANY, INC.

CHEHICAL & ALLIED PRODUCTS

DURA-WOOD

ALEXANDRIA, LA

SAMPLE COLLECTION DATA

- LAB		DA	DATE		
SAMPLE NO.	SAMPLE SOURCE	COLLECTED	RECEIVED		
AL-93	B5 15-16.5	9/3/85	9/4/85		
AL-94	B5 20-21.5	9/3/85	9/4/85		
Al95	SB-8B 30-31.5	9/3/85	9/4/85		
AL-96	SB-8B 35-36.5	9/3/85	9/4/85		
AL-97	SB-8B 40-41.5	9/3/85	9/4/85		
AL-98	SB-8B 45-46.5	9/3/85	9/4/85		
AL-99	SB-88 50-51.5	9/3/85	9/4/85		
AL-100	B9 12.5-14	9/3/85	9/4/85		
AL-101	B9 15-16.5	9/3/85	9/4/85 ·		
AL-102	B12 15-16.5	9/3/85	9/4/85		
AL-103	B12 20-21.5	9/3/85	9/4/85		
- AL-104	B15 10-11.5	9/3/85	9/4/85		
AL-105	B15 12.5-14 :	. 9/3/85	9/4/85		
AL-106	B15 15-16.5	9/3/85	9/4/85		
		· · · · · · · · · · · · · · · · · · ·			
			-		
					
	•				
		•			

LECTED BY:

TABLE 2 KOPPERS COMPANY, INC. CHEMICAL & ALLIED PRODUCTS DURA-WOOD ALEXANDRIA, LA

SUMMARY OF ANALYTICAL DATA

AB SAMPLE NO.	PARAMETERS		
	Oil & Grease		
AL-93	360		
	427		
AL-95	4290		
- AL-96	1670		
AL-97	5190		
- AL-98	1060		
AL-99	970		
AL-100	440		
AL-101	533		
AL-102	690 .		
· AL-103	840		
AL-104	520		
AL-105	1590		
AL-106	1090		
•			
-			
<u> </u>			

OTE: Test results in mg/kg unless otherwise noted.

SOIL BORING LOGS

		•		•	
		BORING LOG			
PROJECT_	BORING	10.B-1			
DRILLING METH	K. H. Stroeb	el			
DRILLER	DRILLER Ball Engineering DATE				
GROUND ELEVAT	TION	GROUND WATER DE	PTH (ft):		All policy and a second control of the secon
		AT COMPLETIC	N		
		AFTER	OURS		,
STRATA SAMPLE			•		
DEPTH DEPTH		DESCRIPTION			
	-	•	•	•	
	- - Red/brown CLAY	', stiff, tr root f	ragments		
5	-		•		
	-				
	-				
	_ Red/brown Sili	ty CLAY, tr vf sand	3	•	•
10		AND Ideals slee			
	_ Ked/brown i S.	AND, little clay			
					·
15	Red/brown CLA	V .baill			
	L Red/blown CLA	-			
1 1	-				
20	- Red/brown Sil	ty CLAY, tr f sand			
1				•	
+	-				
1 ‡					
	-	• •			
I I .		•	•	•	
1 +					
+	-			•	
1 ‡	F		·		
1 +	-	•		•	
+	-				•
^		C-12			•

				·	
•		BORING LOG			
PROJECT	Dura-Wood Trea	sting Company		BORING NO	B-2
DRILLING METHO	D Hollow Stem	Auger	GEOLOGIST	K. H. Stroeb	el
DRILLER	Ball Engineer:	Ing	DATE	6/5/85	
GROUND ELEVATI	ON	GROUND WATER D	EPTH (ft):		
		AT COMPLETI			
	-	AFTER	HOURS		•
		•		7	·
2201211212121		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			·
STRATA SAMPLE DEPTH DEPTH		DESCRIPTION			
-					
	Red/brown CLA	V 6+166			
	Red/DIOWN CLA	1, 50111			
1 1	-				
	Red/brown Sil	ty CLAY, stiff		•	
10	- `				•
	Red/brown Sil	ty CLAY, some vf	sand		
15	•	•			
	Gray f SAND,	little silt			
\ '+ · -		•			
20	D 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	150 2 F.F.			•
	Red/brown CLA	AY, SELLI		•	
·1 + -	•				
25	• 				
1.++	<u>.</u>				
1. 1	-				
1. 1.	- 		•		
III	-		•		
1 1 1	- -			•	
1 + +	-	•			
1 1					
1 1	<u>-</u>				•
	-	. C-13		:	

Γ		DODING	100	· · · · · · · · · · · · · · · · · · ·	
	PROJECT Dura-Wood Tr	BORING Company		RORING NO. B-3	
1	DRILLING METHOD Hollow St			ST_ K. H. Stroebel	_
1	DRILLER Ball Engine	ering	DATE	6/5/85	
	GROUND ELEVATION		R DEPTH (ft):		
	· ·.	AT COMPL		-	
		AFIEK	HOURS	=_{	
			•		
	STRATA SAMPLE DEPTH DEPTH	DESCRIPT	ION		_
	-				-
	Red/brown C	TAY, stiff			
1		will other	•		
	5				
	·				
	10				
		silty CLAY, littl	e vf sand		
٠.	Red/brown S	Silty CLAY, some	vf sand		-
	Red/brown S	Silty CLAY and vf	sand		-
	Brown CLAY	stiff	•		
•	20	•		·	
				•	
	25—				
	1. + +				
	1 ‡ ‡		•		
	1 + -				
	1 7 6			•	
		•			
•		•			
<i>,</i> ; ;	1 ‡ ‡	C-14	,	<u>.</u>	
	1 I	C-14			

				<u> </u>	
•		BORING LOG			
PROJECT	Dura-Wood Tre	ating Company		BORING NO. B	-4
DRILLING METHO	D Hollow Stem A	uger	GEOLOGIST_	K. H. Stroebel	
DRILLER	Ball Engineer	ing	DATE	6/6/85	
GROUND ELEVATI	ION	GROUND WATER DEP	TH (ft):		
		AT COMPLETION			
		•	URS		
				1	
			•		
STRATA SAMPLE DEPTH DEPTH		DESCRIPTION			
-					
	- 11				
	Red/brown CL	AY, stiff, tr roots	•		
5	-	•			
1 .		•			
				•	
10			· · · · · ·		<u> </u>
	Red/brown Si	lty CLAY, tr vf sand	i	·	
15	- •	•			,
	•	•	•	·	
1 1 1		•			
20	Red/brown CL	AY, stiff			
				<u> </u>	-
1 + +	•				
25 —	<u>-</u>				
1 . ‡ ‡	• •				
1 + +	-				
1 1 .	-		•		
1 + +	-		•		•
1 1	-		•	•	
1 + +	-	•			
T T	-				
,					
· . + ·	_	C-15		•	
, ,					

	•		·	
	BORING LOG			
PROJECT Dura-Wood Tre			_ BORING NO	B-5
DRILLING METHOD Hollow Stem	Auger .	GEOLOGIST	K. H. Stroebel	
DRILLER Ball Engineer	ing	DATE	6/6/85	
GROUND ELEVATION	GROUND WATER DEP	TH (ft):		
	AT COMPLETION		1	
	AFTER HO	URS		
			1	
		•	<u> </u>	
STRATA SAMPLE DEPTH DEPTH	DESCRIPTION			•
-				يؤخص بالأنيور بيدها الأدار
Red/brown CI/	Y, roots, stiff			•
	, 10013, 01111	•		
5				•
Red/brown St	lty CLAY, tr vf sand			
10	tey outing the viriation		•	• ,
Rod/brown St	lty CLAY and f SAND,	light oil in a	-iava-fvaatuvaa	······································
15 creosote odo	r	right off the	micro-fractures,	
 -	•			
. 20		· · · · · · · · · · · · · · · · · · ·		<u>.</u>
Red/brown CL	AY, stiff			
1 7 . F			•	
25 -				
1 7 -				
1 · † · t				
1 + +	· ·			
			•	
1 + -			• .	•
		•		•
· , + +	•			
	•			•
	C-1 6			
~ 1	C-10		•	

						
ı	•		BORING LOG	• .		
۱	·	Dura-Wood Trea			BORING NO	
•	•	HOD Hollow Stem		_	K. H. Stroebe	<u>1</u>
	DRILLER	Ball Engineer:	ing	DATE	6/7/85	
	GROUND ELEVA	TION	GROUND WATER DEP	TH (ft):		
1		;	AT COMPLETION			
			AFTERHO	URS		
			·	•		
	STRATA SAMPLE DEPTH DEPTH		DESCRIPTION			
	\rightarrow	_				
		Red/brown CLA	Y, stiff, tr roots	•		
	5		·	,		
		· · · · · · · · · · · · · · · · · · ·				
		Red/brown Sil	ty CLAY, tr f sand		•	
	10	-				•
. :		<u>-</u>				
	15	-				
	"	-	•			
	1	-	-			
	20	Pod /hears 67	IV on f and			
		_ Red/brown CL/	AI, ET I SENO		·	
	1 1		•			•
	25—	<u>_</u>				
	1					
		-				
	1 1.	F		•	•	
	1 1	<u> </u>		•		•
	1	-		•	·	
	1 ‡	-				
	† †	-	•			•
ì	I I	F				
	1 . †	F	℃-17		:	

			•
	BORING		
	a-Mood Treating Company		BORING NO. B-9
DRILLING METHOD HO	ollow Stem Auger	GEOLOGIST	K. H. Stroebel
DRILLER Bal	l Engineering	DATE	6/7/85
GROUND ELEVATION	GROUND WATE	R DEPTH (ft):	
	AT COMPL	ETION	
	AFTER	HOURS	
arairile Avai Cl		•	
STRATA SAMPLE DEPTH DEPTH	DESCRIPT	ION	
+/-			
Red	/brown CLAY, stiff, tr re	oots	
	·	•	
5			•
	·		
Rec	d/brown CLAY, tr f sand		_
10-		··	
Rec	d/brown f SAND and SILT		
			•
	d/brown f SAND and SILT, aining on sand grains	slight creosote odor	, small oil
1	aining on sand grains		
1 7	•		
			
20 Re	d CLAY, stiff	-	
			•
25	•		
1. † . †			
I I F		•	
' I I F			•
ltt			,
, I F	•		
1 + +	c -1	18	•

·			BORING LOG		·
-	· PROJECT				BORING NO. B-10
	•	Hollow Stem Aug			M. A. Christie
- . '	DRILLER	Ball Engineering		DATE	6/14/85
	GROUND ELEVATION	Y	ROUND WATER DEPT		
-			AT COMPLETION		
			AFTERHOU	JRS	
<u> </u>					
_	STRATA SAMPLE DEPTH		DESCRIPTION	•	•
ì			•		
-		Dark brown SILTY	CLAY, tr'roots,	slight odor	•
				•	•
-	5	Brown CLAY, tr re	oots, slight odor	•	
	1				
·!		Brown Clayey SIL	T, tr vf sand. sl	light odor	•
	10			•	•
į					<u> </u>
			•		
1.	15	'Brown Clayey SIL'	T, some vf sand,	slight odor	
<u>!</u>		•		•	
1			•		
١	20.	Brown/red CLAY			
		Blown/Ted CDA1	•		<u></u>
_			•		
	25 —				
	1. ‡ ‡				
Ĺ					₽ 1
-	I I F			•	
<u> </u>				•	
	1 + +				
-	-	•			
1	1 + +		•		
Ĺ	-				
į	1 + -		C-19		:

		BORING		•
-		Dura-Wood Treating Company		BORING NO. B-11
1	•	D Hollow Stem Auger		M. A. Christie
	DRILLER	Ball Engineering	DATE	6/14/85
	GROUND ELEVATI	ON GROUND WATE	R DEPTH (ft):	
-		AT COMPL		
		AFTER	HOURS	
- -		•		
	STRATA SAMPLE DEPTH	DESCRIPT	ION	
	+	•	-	
ı		Brown/red Silty CLAY, tr roo	ots .	• •
	5	·	•	
i		•		
İ	10	Brown CLAY, tr roots, micro-	-fractures	
_			•	•
		Brown/tan Clayey SILT, litt	le vf sand, slight o	odor .
<u> </u>				•
<u> </u>	15			•
		•		
	1 2 + +			
i	20.	Brown/red CLAY		
1	1 + -	•		
_	25	-		
į	1: 1 . 1	•		
ميا	Ī.	•	•	•
	1	-	•	
_	1 + +	-		•
		• •	•	
1	+ +			
<u> </u>	+	-		•
•		- - 	20	· ·

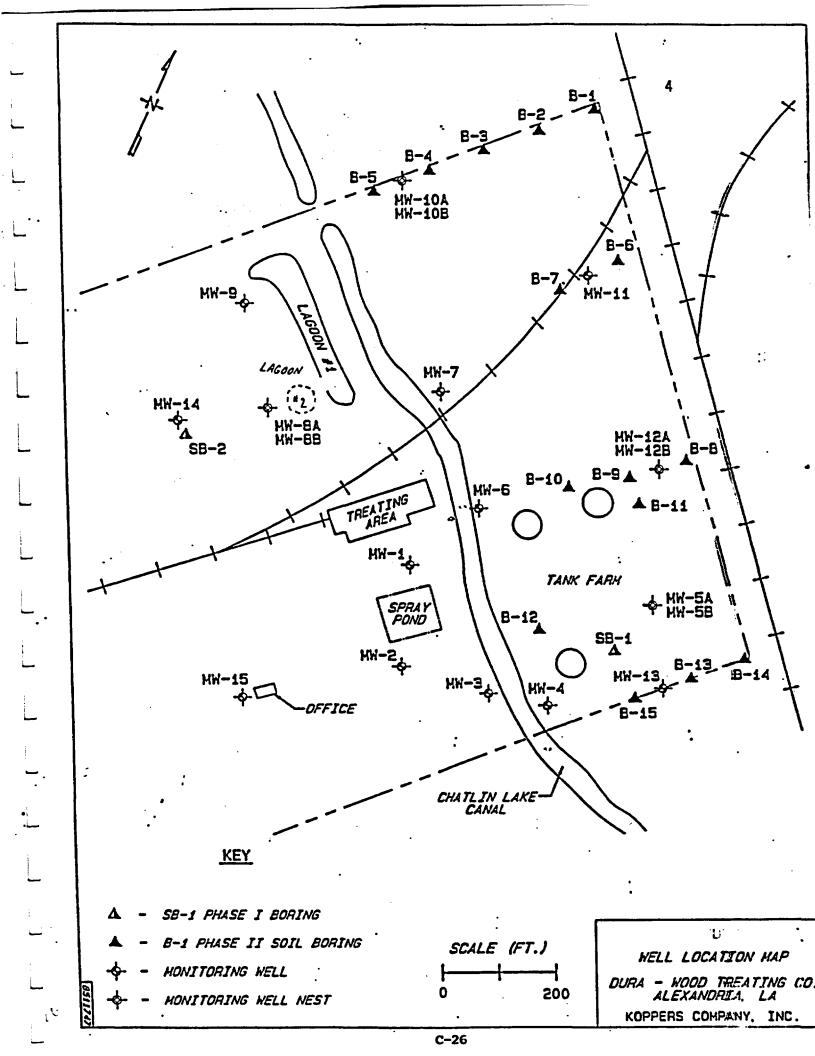
			BORING LO	<u>g</u>	•	
		Dura-Wood Tre			BORING NO	
I	•	OD Hollow Stem A			M. A. Christie	
·. I		Ball Engineer		DATE	6/14/85	
	GROUND ELEVAT	ION	GROUND WATER I			
			AT COMPLET			
-			AFTER	HUUKS	-	
			•			
_	STRATA SAMPLE DEPTH		DESCRIPTIO	N	•	
_		Brown Silty (LAY, tr roots, s	light odor		
_		Brown Silt an	nd Clay, tr roots	, micro-fractures	•	 +_ _
	5		CLAY, tr roots	······································	·	
-	1 1					
	10	• •••		•	•	•
_	1.	• •		•	•	
_•		•		· · · · · · · · · · · · · · · · · · ·		
;	15	Brown/tan fm	SAND, odor, oil	stains on grains		
		- -	• ,	•		
1	1 1	-	-			
<u></u>	20,	_ Brown CLAY		 		
į.	1 1	<u>-</u>			•	
•	25 +	 		_		
;	1. +	•				
_	·	F				•
į į		_		•		•
	1	E		•	•	
	_	F	•	:		
!	1 ‡	-				
	- , l	<u> </u>		<u>.</u>		
()	_	-	. c-2	1	:	

-		· <u>B</u> 01	RING LOG	•	
_	PROJECTDur	a-Wood Treating Comp	any	BORING NO.	B-13
ł	DRILLING METHOD 1	ollow Stem Auger	GEOLOG	IST M. A. Christie	
- '	DRILLER Bal	ll Engineering ·	. DATE_	6/12/85	
	GROUND ELEVATION	GROUND	WATER DEPTH (ft):		
-			OMPLETION_		
	**************************************	AFTE	RHOURS		
-		·			
	CTOATAL CANOL CL				
	STRATA SAMPLE DEPTH DEPTH	DESC	RIPTION		
		orm/rod Cilen CTIV a		· ·	
	BT	own/red Silty CLAY, t	r roots	· · · · · · · · · · · · · · · · · · ·	
		•	•		
	5 Br	own/red CLAY, tr root	s, micro-fractures		•
			-	•	
			. •		
	10			· · · · · · · · · · · · · · · · · · ·	
•	Br Br	own/red Silty CLAY,	decomposed organic m	atter	• .
<u> </u>	(t	wigs, fibers)	recomposed organize in		
i	15	•			•
				•	
i	1 + -	•	•		
L	20				
:	Br	own CLAY, tr roots			
-	1 I F	•			
;	25				
^	- I - I		·		
1	1: 1 . [••
-			•		•
į			•		
-	'l + -			•	
:			•		
-	· + +	•	•		
	1 ‡ ‡	•			•
_	[+ -		C-22		

· PROJECT	BORING Ours-Wood Treating Company	LOG	BORING NO. B-14
	Hollow Stem Auger	GEOLOGIST	M. A. Christie
•	Ball Engineering	DATE	6/12/85
GROUND ELEVATION	GROUND WATE AT COMPL AFTER	R DEPTH (ft): ETIONHOURS	
·			·
STRATA SAMPLE DEPTH DEPTH	DESCRIPT	TION	•
5	Brown Silty CLAY, tr roots, (twigs, fibers)	decomposed organic	matter
15	Brown Silty CLAY, little f	sand	
	Brown/gray Silty CLAY		
20.	Brown/red CLAY		
25 — —			
	•		
, + -	c-:	23 .	

ı		•			
	PROJECT Dura-Wood	BORING NO. B-15			
1	DRILLING METHOD Hollow Stem Auger GEOLOGIS			M. A. Christie	
ļ	DRILLER Ball Engi	neering · .	DATE	6/13/85	
	GROUND ELEVATION	GROUND WATER I			
	STRATA SAMPLE DEPTH DEPTH	DESCRIPTION			
	- Brown Sil	ty CLAY, tr roots			_
		i CLAY, tr roots, micr matter (twigs, fibers)		omposed .	
	10	· · · · · · · · · · · · · · · · · · ·		•	<u>.</u>
•	Brown Si	lt and Clay, tr roots, l stains in fractures	, micro-fractures	•	
-	20				
_	Brown Si	lty CLAY, slight odor			
~	25				
_			•		
_				•	
		•	. •		
	· + -	C-24			•

MONITORING WELL LOGS AND LOCATIONS



Koppers Company, Inc. Research Department

KOPPERS

his drawing and all information thereon is the property of Koppers Company, Inc., Research Department and is confidential and must not be made public or SKETCH SHEET

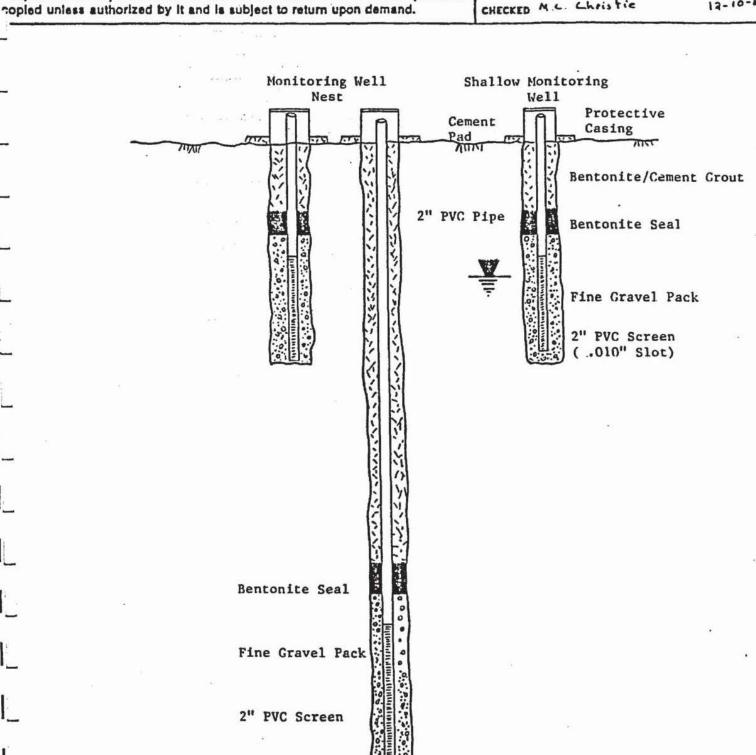
NAME

12-4-85

DRAWN

K.H. Stroebel

CHECKED M.C. Christie



Installation Schematic Typical Well DATK DATK DESCRIPTION

ALEXANDRIA, LA DURA - WOOD TREATING ACT

	MONITORING WELL LOG	
PROJECT Durawood Treating	WELL NO. MW-1	
DRILLING METHOD Hollow Stem	Auger GEOLOGIST	
DRILLER Geotechnical Testin	ng Laboratory DATE	6/25/84
GROUND ELEVATION	GROUND WATER DEPTH (ft):	CDAVEL DACK CO. 4. A.
TOP OF WELL 75.2'	AT COMPLETION	GRAVEL PACK CALLED BENTONITE
DEPTH OF WELL (ft) 20'	AFTERHOURS	BACK FILL CONCRETE
CASING MATERIAL 2" PVC	SCREEN 0.010" Slot PVC	SCREEN
STRATA SAMPLE DEPTH DEPTH	DESCRIPTION	CONSTRUCTION
5 Brown-red	CLAY, tr vf sand little vf sand	

	MONITORING WELL LOG	,	· · · · · · · · · · · · · · · · · · ·	
PROJECT Durawood Treating	Company		_ W	ELL NO. MW-2
DRILLING METHOD Hollow Ste	m Auger	GEOLOGIST		
DRILLER Geotechnical Testi	ng Laboratory	DATE	6/27/84	
GROUND ELEVATION	GROUND WATER DEPT	ዘ (ft):	GRA	VEL PACK [PACK]
TOP OF WELL 74.41	AT COMPLETION		BEN	TONITE
DEPTH OF WELL (ft) 19.4	AFTERHOU	RS		K FILL CRETE
CASING MATERIAL 2" PVC	SCREEN 0.010" s1c	t PVC	SCR	EEN EEE
STRATA SAMPLE DEPTH DEPTH	DESCRIPTION		·	CONSTRUCTION
1 -	roots, twigs			1
1 TE			1	
Red CLAY,	small oil pockets		·	
	and SILT, odor			
15 Red-brown	SHLT and vd SAND, od	or	-	
20 - Red-brown	CLAY			
		·	-	-
			•	‡ =
	•		-	<u> </u>
1 ± ±				‡ :
-			,	<u>†</u> =
1 ‡ ‡			-	-
- + -				<u> </u>
T F			,	+ -
- · <u>†</u>			-	<u> </u>
T			_	

فخطان المالية المراجع		
	MONITORING WELL LOG	
PROJECT Dur	awood Treating Company	WELL NO. MW-3
DRILLING MET	HOD_ Hollow Stem Auger GEOLOGIST	
		25/84
GROUND ELEVA		GRAVEL PACK
TOP OF WELL_		BENTONITE STATES
DEPTH OF WEL	L (ft) 20 AFTER HOURS	BACK FILL AND
	IAL 2" PVC SCREEN 0.010" slot PVC	SCREEN
STRATA SAMPLE DEPTH	DESCRIPTION	CONSTRUCTION
1 + 1	Red TOPSOIL, clayey	
1 1	-	1 1分 13 11
5		十以以外
1	- Red CLAY	
+	- Ked Olasi	+ 2 2 .
10 +	-	
10 T	· .	
<u>†</u>	-	
Ŧ	-	
15	<u> </u>	工 加口到了
Į	Red CLAY and SILT, tr vf sand, oil pockets	
+		
20 +	<u></u>	
+ .		 ‡
. I	F	+
+	F	<u> </u>
		4
. 🕂	-	· •
· †	t	Ţ
1	-	+
†		. 1
- ‡	F	+
+	-	1
- ‡		+ ·
	·· ·F ····	1
<u> </u>	E	Į
I		· +

	PONITORING WELL LOG	
- PROJECT D	urawood Treating Company	_ WELL NO. MW-4
-	HOD Hollow Stem Auger GEOLOGIST	WEEL HO.
		6/26/84
GROUND ELEVATION OF WELL 7. DEPTH OF WELL	AT COMPLETION	GRAVEL PACK BENTONITE BACK FILL CONCRETE
CASING MATERI	AL 2" PVC SCREEN 0.010" slot PVC	SCREEN
STRATA SAMPLE DEPTH	DESCRIPTION	CONSTRUCTION
10	Red CLAY and SILT, odor, oil pockets Red CLAYEY SILT, odor, oil pockets Red-gray vf SAND, little silt, odor	
20	Red-gray CLAY, slight odor	

DRILLING METHOD Hollow Stem Auger GEOLOGIST DRILLER Geotechnical Testing Laboratory DATE 6/27/84 GROUND ELEVATION GROUND WATER DEPTH (ft): TOP OF WELL 74.2' AT COMPLETION BENTONI BACK FILL CONCRET CONCRET CASING MATERIAL 2" PVC SCREEN 0.010" slot PVC STRATA SAMPLE DESCRIPTION	TE SAME ILL SERVICE IE SAMS SERVICE EEEEE
DRILLING METHOD Hollow Stem Auger GEOLOGIST DRILLER Geotechnical Testing Laboratory DATE 6/27/84 GROUND ELEVATION GROUND WATER DEPTH (ft): TOP OF WELL 74.2' AT COMPLETION BENTONI BACK FIL CONCRET CASING MATERIAL 2" PVC SCREEN 0.010" slot PVC STRATA SAMPLE DESCRIPTION	PACK PACKS
GROUND ELEVATION GROUND WATER DEPTH (ft): TOP OF WELL 74.2' AT COMPLETION BENTONI DEPTH OF WELL (ft) 19.5 AFTER HOURS CONCRET CASING MATERIAL 2" PVC SCREEN 0.010" slot PVC STRATA SAMPLE DESCRIPTION	TE SAME ILL SERVICE IE SAMS SERVICE EEEEE
TOP OF WELL 74.2' AT COMPLETION BENTONI DEPTH OF WELL (ft) 19.5 AFTER HOURS CONCRET CASING MATERIAL 2" PVC SCREEN 0.010" slot PVC STRATA SAMPLE DESCRIPTION	TE SAME ILL SERVICE IE SAMS SERVICE EEEEE
TOP OF WELL 74.2' AT COMPLETION BENTONI DEPTH OF WELL (ft) 19.5 AFTER HOURS CASING MATERIAL 2" PVC SCREEN 0.010" slot PVC STRATA SAMPLE DESCRIPTION	TE SAME ILL SERVICE IE SAMS SERVICE EEEEE
CASING MATERIAL 2" PVC SCREEN 0.010" slot PVC CONCRET	TE 次分元 音音音
CASING MATERIAL 2" PVC SCREEN 0.010" slot PVC STRATA SAMPLE DESCRIPTION	
DEPTH DEPTH DESCRIPTION CO	DNSTRUCTION
	ソンノノノノとは、おけんのからはないのの

•		HOUSTONSHIO HIGH LAC			
_		MONITORING WELL LOG			
	 _	Ourswood Treating Company	V	VELL NO.M	W-5B
-		HOD Hollow Stem Auger GEOLOGIST			
	DRILLER	Geotechnical Testing Laboratory DATE			
_	GROUND ELEVA		GR/	AVEL PACK	<u>चित्रसम्बद्ध</u>
	TOP OF WELL_	74.0' AT COMPLETION	BEN	NTONITE	
	DEPTH OF WEL	L (ft) 30 AFTER HOURS		CK FILL NCRETE	公司
		IAL 2" PVC SCREEN 0.010" slot PVC		REEN	2222
	STRATA SAMPLE DEPTH DEPTH	DESCRIPTION		CONSTR	UCTION
_	5	Red CLAY and SILT, small black, odorous pockets		- (X)	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\
_	10 +	Red CLAY	-		
	15	Red CLAYEY SILT, tr vf sand, odor	•		\$\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\
	20	Red CLAYEY SILT, some vf sand	•		
_	† .	Gray CLAY, stiff			
	30 —	Blue CLAY, stiff			
	+				
	+	- - -		† ,. †	

ne 1

1

CUEET

MONITORING WELL LOG	
PROJECT Durawood Treating Company	WELL NO. MW-6
DRILLING METHOD Hollow Stem Auger GEOLOGIST	
DRILLER Geotechnical Testing Laboratory DATE 6/	/27/84
	21/04
GROUND ELEVATION GROUND WATER DEPTH (ft):	GRAVEL PACK
TOP OF WELL 73.3' AT COMPLETION	BENTONITE BACK
DEPTH OF WELL (ft) 19.8 AFTER HOURS	BACK FILL CONCRETE ACCESS
	SCREEN
CASING MATERIAL 2" PVC SCREEN 0.010" slot PVC	
STRATA SAMPLE DESCRIPTION	CONSTRUCTION
	(1) (2)
Red CLAY, stiff	· 书图 图 =
1 + +	エーリン ロードン (一一)
I ,I C	上图 图上
	干划 划一
· † =	
Red SILT and CLAY, odor	
10 -	
Red f SAND, some silt, odor	
1	
15 - Red f SAND and SILT, odor	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
REU I SAND BING SIZE, GOOT	+ (計 (3) ・
20 + -	
- Red CLAY	
	I :
1· + -	+
1 + 	<u> </u>
	Ţ
	+
\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	
	Ţ
	. 🕇
 	<u> </u>
	Į.
	†.
	1.
	I
	+

_		٩	ONITORING WELL LOG	•	
	PROJECTDu	rawood Treating C			WELL NO MW-7
	DRILLING MET	THOD Hollow Stem	Auger	GEOLOGIST_	
	DRILLER	Geotechnical Test	ing Laboratory	DATE	6/28/84
	GROUND ELEVATOR OF WELL DEPTH OF WEI		GROUND WATER DEP AT COMPLETION AFTERHO		GRAVEL PACK PACK BENTONITE BACK FILL SECURITY CONCRETE
	CASING MATE	RIAL 2" PVC	SCREEN 0.010" slo	t PVC	SCREEN
<u> </u>	STRATA SAMPLE DEPTH DEPTH		DESCRIPTION		CONSTRUCTION
	10 — 15 — 25 — 25 — 4 — 4 — 4 — 4 — 4 — 4 — 4 — 4 — 4 —	Red CLAY, s Red CLAY as Red CLAYEY	stiff, roots nd SILT, creosote in SILT, tr vf sand, of and SILT, odor, oi	odor	
		<u>-</u>			

_[MONITORING WELL LOG	
	PROJECT Durawood Treating Company	WELL NO. MW-8
	DRILLING METHOD Hollow Stem Auger GEOLOGIST	
		28/84
-	GROUND ELEVATION GROUND WATER DEPTH (ft): TOP OF WELL 76.7' AT COMPLETION AFTER HOURS	GRAVEL PACK BENTONITE BACK FILL CONCRETE
	CASING MATERIAL 2" PVC SCREEN 0.010" slot PVC	SCREEN
1	STRATA SAMPLE DESCRIPTION	CONSTRUCTION
_	- Red-brown CLAY, roots	. 土谷 沙日
	5 Red-brown CLAY, oily, odor	
_	`I	
_	10 - Red-brown CLAYEY SILT, tr vf sand, oily, odor	‡ 💹 🗕 🖰
	Red-brown SILTY CLAY, tr vf sand, oily, odor	
_	1 ‡ ‡	
<u> </u>	Red-brown SILTY CLAY, oily, odor, 2" tip red clay	-
_	Red-brown CLAY	
_	25 + -	
	1. ‡ F	$\frac{1}{2}$
_	1 ‡ F	<u> </u>
-	1	<u> </u>
. manage	I E.	<u> </u>
· -	- - - - - - - - - - 	<u>‡.</u> . :
	I E	<u></u>
		+ -

. •	MONITORING WELL LOG		
PROJECT Dura-Wood Treat			IELL NO. MW-8B
DRILLING METHOD Hollow Sto	· · · · · · · · · · · · · · · · · · ·		
DRILLER Geotechnical To	esting Laboratory DATE 6	/10/8	
GROUND ELEVATION	GROUND WATER DEPTH (ft):	GR/	AVEL PACK (3434)
TOP OF WELL	AT COMPLETION	BEN	NTONITE :
DEPTH OF WELL (ft) 33.5	AFTERHOURS		CK FILL NCRETE 2233年
CASING MATERIAL 2" PVC	SCREEN 0.010" Slotted PVC	· SCI	REEN
STRATA SAMPLE DEPTH DEPTH	DESCRIPTION		CONSTRUCTION
See Descriptio	on of MW-8A		
			-
25 Red/brown CLAY	, micro-fractures filled with ligh	-	-
oil, strong cr		•	
		•	Ţ
30			<u> </u>
	, micro-fracturing, slight odor	•	-
	· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·	+
			+
Gray/brown Si	lty·CLAY, light oil staining on ight odor	-	-
	•	•	+
	,	•	Ŧ
40		•	<u>†</u> .
- Gray/brown Si	lty CLAY, tr f sand, slight odor		+
			<u></u>
45			+
Brown CLAY, s	light odor, micro-fractures		‡
			+
50	•		#
	ilty CLAY, little f sand		<u>.</u> † .
1 ‡ ‡	•	•	1
+ +			+
55			T .
1 † +	•		+
·	· · · · · · · · · · · · · · · ·		ļ .
1 + -	C-37		ı

1		MONITORING WELL LOG	
1	PROJECT Dura-Wood Tr	eating Company	WELL NO. MW-8B
l	DRILLING METHOD Hollo	w Stem Auger GEOLOGIST	K. H. Stroebel
1	DRILLER Geotechnical	Testing Laboratory DATE	
	GROUND ELEVATION	GROUND WATER DEPTH (ft):	CRAVEL DACK TO THE
	TOP OF WELL 75.90	AT COMPLETION	GRAVEL PACK
	DEPTH OF WELL (ft) 33.50	AFTER HOURS	BACK FILL CONCRETE
	CASING MATERIAL 2" PVC	SCREEN 0.010" Slotted PVC	SCREEN
	STRATA SAMPLE DEPTH DEPTH	DESCRIPTION	CONSTRUCTION
		·	+ (>) (.)
	1 1 1		+ (7) 1(1)
	l I F	,	1 1/1 1/2
	5	•	+ 1/1 1/1
	l I F		I (!) //
	1 + +		K
	10-		1 1/1 KI
	1 + +	•	
	1		1 1/1 1/1
	1 .+	·	+ 1/1 1/1
•	15-	•	1 1/1 1/1
	1 + -	•	+ 1
	1		
	20-	·	十 選 題
	1 I F		
	1 +		+ :: ::
	25 -		
	1 + -		+ \:
	1 1	•	
	1 + -	•	
	30		
	1 + -		
	ltt		† <u>U</u>
	35+ -	•	Į.
		•	†
	I I F	•	T
,		c-38	: †
		£-30	

	MONITORING WELL LOG	
	rawood Treating Company	WELL NO. MW-9
DRILLING ME	THOD Hollow Stem Auger GEOLOGIST	
DRILLER_ G	eotechnical Testing Laboratory DATE 6	/28/84
GROUND ELEV	ATION GROUND WATER DEPTH (ft):	CDAVEL DADY COM
TOP OF WELL	75.5' AT COMPLETION	GRAVEL PACK BENTONITE
1	LL (ft) 19 AFTER HOURS	BACK FILL NAME OF THE PARKET
CASING MATE	RIAL 2" PVC SCREEN 0.010" slot PVC	CONCRETE PROPERTY SCREEN
STRATA SAMPLE DEPTH DEPTH	DECEDIOTION	CONSTRUCTION
1 ‡	Red-brown CLAY, ROOTS	. # 後
†	Red CLAY & FILL, odor	
3	- Cran brown CV AV adam	
·‡	- Gray-brown CLAY, odor	
10 +		
1	Red-brown CLAY, creosote in fractures, odor	
+	Red CLAYEY SILT, tr vf sand; odor	
15 🕇		
1 ±	Red-brown f SAND and SILT, odor	
Ţ	-	
20 🛨	- Red-brown CLAY, slight odor	-
. l t		<u>†</u>
.]	-	+
1 1		<u> </u>
1	-	+
1 1	E .	1
- I		1 -
+	 -	+
- İ		· I
1 1	F	+
_	 	+
1	<mark></mark>	Ī.,
1 +	-	+
⁻ 	 -	†
. [· ·	-

	<u>.</u>	MONITORING WELL LOG	•	
PROJECT Dura-Wood Treating Company			WELL NO. MIN-10A	
DRILLING METHOD Hollow Stem Auger GEOLOGIST				
DRILLER	Ball Engineeri	ng	DATE	6/12/85
GROUND ELEV		GROUND WATER DEPTH (ft):		GRAVEL PACK
TOP OF WELL		AT COMPLETION		BENTONITE 接受器 BACK FILL 常要条辖
DEPTH OF WE	LL (Tt)	AFTER HOURS		CONCRETE SCREEN
l	RIAL	SCREEN		SCREEN
STRATA SAMPLE DEPTH		DESCRIPTION		CONSTRUCTION
15	See well log f	or MW-10B		マンソン () () () () () () () () () (
I		C-40		†

	HONITORING WELL LOG				
			1.	ובון אַס	105
PROJECT <u>Dura-Wood Treating Company</u> DRILLING METHOD Hollow Stem Auger GEOLOGIST					
DRILLER Ball Engineeri		DATE			························
GROUND ELEVATION	GROUND WATER DEPTH				
TOP OF WELL	AT COMPLETION	" 		AVEL PACK NTONITE	21.7.EX
DEPTH OF WELL (ft)	AFTER HOURS		BAG	CK FILL	
		•		NCRETE REEN	
CASING MATERIALSTRATA SAMPLE			<u> </u>	conc.c	MATAN
DEPTH DEPTH	DESCRIPTION			CONSTR	RUCTION
Brown/red Silt	y CLAY, tr roots			t (i	171:
	•		•	+ 14	13/ .
5	·		·		1:// _
Brown CLAY, m	lcro-fractures, decomp	osed organic	•	t M	
matter (roots	, Ilbers)		•	FKI	1-1
10			-	1 1/1	-
│				+ 11	121
				I	-121
Brown/tan Sil	ty CLAY, tr f sand			土门	1-1 -
1 1				+ 3	
	•				
20				十	墨
-				Ŧ [ii]	
Brown/red CLA	Y, micro-fractures	•		1 13	
25	•			+ 1	
-				TH	
Gray/blue CLA	Y	•		1 1	
30	. ·			1 1	- ;;]
	len CTAY con 5 and			士 胜	
oray/brown S1	lty CLAY, some f sand	, ir roots	•	十月十	
	•			I W	
35	•			†	
				7	
1 7 5				1	
1 + H	C-41		•	+	_

.....

MONITORING WELL LOG	
PROJECT Dura-Wood Treating Company	WELL NO. MV-11
DRILLING METHOD Hollow Stem Auger GEOLOGIST	M. A. Christie
DRILLER Ball Engineering DATE	6/13/85
GROUND ELEVATION GROUND WATER DEPTH (ft): TOP OF WELL 74.37 AT COMPLETION AFTER HOURS	GRAVEL PACK PACK BENTONITE BACK FILL BACK FILL CONCRETE
CASING MATERIAL 2" PVC SCREEN 0.010" Slotted PVC	SCREEN
STRATA SAMPLE DEPTH DEPTH DESCRIPTION	CONSTRUCTION
Brown/red Silty CLAY, tr roots, micro-fractures Brown/red CLAY, tr roots and fibers Brown CLAY and SILT, little f sand, slight odor Brown Silty CLAY 25	

	MONITORING WELL LOG		
PROJECT Dura-Wood Tre	WELL NO.MW-12A		
DRILLING METHOD Hollow Stem Auger GEOLOGIST			M. A. Christie
DRILLER Ball Engineer	ing	DATE	6/12/85
GROUND ELEVATION	GROUND WATER DEPT	u /#+\.	
TOP OF WELL 73.31	AT COMPLETION	11 (10)	GRAVEL PACK
DEPTH OF WELL (ft) 19.5	AFTER HOU	DC	BENTONITE BACK FILL
DEF 111 01 RELL (11) 13.3	AFTERROO	7.3	CONCRETE PERSONAL
CASING MATERIAL 2" PVC	SCREEN 0.010" Slot	ted PVC	SCREEN SEEES
STRATA SAMPLE DEPTH DEPTH	DESCRIPTION	•	CONSTRUCTION
See well log	of MU-12R)		+ 13 13 -
	, OL MM-120)		1 以 () :
		•	十 / / / / -
5 -			
1 ·1 ·1			
1 +	•		
10			
1 + -		•	
1			
15-			- 1
1			
1 + +	•		
20 -			<u>† 14-14 :</u>
1 -+ +			+
. ‡	•		İ
1 a+ +			4
237 -			<u> </u>
1 + -		•	1
			• ‡
1 + -	•		<u> </u>
			<u>†</u>
1 + +			· I
1 ‡ 上			+
1 + F	•	•	Ţ,
1	·		†
1 +			· I
1. + -			:

	MONITORING WELL LOG			
PROJECTDura-We	ood Treating Company		WELL	NOMW-12B
	llow Stem Auger			
•	nnical Testing Laboratory			
GROUND ELEVATION	GROUND WATER DEP	TH (ft):	GRAVEL	PACK TORTION
TOP OF WELL 74.28	AT COMPLETION		BENTONI	TE.
DEPTH OF WELL (ft)_	30.3 AFTER HO	URS	BACK FI CONCRET	
CASING MATERIAL 2"	PVC SCREEN 0.010" S	lotted PVC	SCREEN	-
TRATA SAMPLE	DESCRIPTION		CC	DISTRUCTION
Brown	red Silty CLAY, tr roots an	d fibers	+ }	数
			‡ }	
5				※ ※ :
Brown	CLAY, micro-fractures		+	
				
10			# 1	
├			+	
Brown	Silty CLAY, some f sand, tr	roots	1	
15	•		<u>†</u>	
-			+ 1	
	•		. ‡	
20			1	:
+>>-			+	
		·	‡	
25			:	
Brown	/red CLAY, micro-fractures		+	
	· .		‡	
30		•	+	
"- 		·	_	Call Rea
Brown	a/gray Silty CLAY, some fm s	and	1	•
35			+	
" 				·
1 ‡ ‡			‡	•
1 + -	C-44	:	+	•

	MONITORING WELL LOG			
PROJECT Dura-Wood Treating Company			WELL NO. MW-13	
DRILLING METHOD Hollow S				ristie
DRILLER Ball Enginee	ring	DATE	6/13/85	
GROUND ELEVATION GROUND WATER DEPTH (ft TOP OF WELL 72.80 AT COMPLETION DEPTH OF WELL (ft) 20.1 AFTER HOURS		1	GRAVEL BENTON BACK F CONCRE	IITE STATE
CASING MATERIAL 2" PVC	SCREEN 0.010" S1	otted PVC	SCREE	
STRATA SAMPLE DEPTH DEPTH	DESCRIPTION		(CONSTRUCTION
fractures	ity CLAY, tr roots	and fibers, mic	ro-	高されたのでは、日間によっている。日間によっている。
Brown/red S	ilty CLAY, little f	sand	· +	
15	-		+	
Brown CLAY				- (Classis) -
	•			-

	MONITORING WELL LOG	
PROJECT Dura-Wood Treating	•	WELL NO. MW-14
DRILLING METHOD Hollow Stem		
DRILLER Ball Engineering	DATE 1-23-	-85
GROUND ELEVATION	GROUND WATER DEPTH (ft):	GRAVEL PACK
TOP OF WELL 75.63	AT COMPLETION	BENTONITE THE
DEPTH OF WELL (ft) 17.60	AFTERHOURS	BACK FILL CONCRETE 公公子
CASING MATERIAL 2" PVC	SCREEN 0.010" Slotted PVC	SCREEN EEEEE
STRATA SAMPLE DEPTH DEPTH	DESCRIPTION	CONSTRUCTION
Red Clayey Red CLAY,	Silt. tr vf sand stiff CLAY, stiff	

	ONITORING WELL LOG		
PROJECT Dura-Wood Trea		t.i	ELL NO
DRILLING METHOD Hollow St			ELL NO. NW-15
DRILLER Ball Engineeri	· · · · · · · · · · · · · · · · · · ·		
GROUND ELEVATION	GROUND WATER DEPTH (ft):	Ī	VEL PACK FRANCE
TOP OF WELL 73.95	AT COMPLETION	BEN	TONITE ESPE
DEPTH OF WELL (ft) 17.6	AFTER HOURS		K FILL CRETE シャジン
	SCREEN 0.010" Slotted PVC		EEN THE
STRATA SAMPLE DEPTH DEPTH	DESCRIPTION		CONSTRUCTION
Brown Silty CL	AY, tr roots	•	
			- 💥 👹
5 Brown/red CLAY	, tr roots, micro-fractures	-	
			·
	·	-	
10		•	
Brown/red Sills	ty CLAY, little f sand	•	
	ry cont, freeze i Same	•	
		•	
15	•	•	
1	-	•	
1 : + +		•	
20		•	•
			Ì
1 25 -		,	·
25		-	‡
1			+
1			Į
1 ‡ [•	. •	_
1 + +	•	•	+
1 ‡ ‡	•		‡
	•	•	+
I I F	•		Ī .
	·		1
	· · · · · · · · · · · · · · · · · · ·	•	+

MONITORING WELL SAMPLING RESULTS

KOPPERS

Interoffice Correspondence

Το	K. H. Stroebel	From	R. D. Hepner		
Location_	Monroeville	Location	Monroeville		
Sublect	Thomas Maria Alamandada TA	Date	August 22, 1985		

Attached are results of analyses on samples AL-37 through 59 collected July 10, 1985, at Dura-Wood, Alexandria, Louisiana.

R. D. Hepner

RDH:ss

Attachments

cc: S. M. Tymiak
J. A. Quagliotti, Jr.

TABLE 1 DURA-WOOD

ALEXANDRIA, LA

SAMPLE COLLECTION DATA

3508-2

3306-2									
٢	LAB		DA	re					
L	SAMPLE NO.	SAMPLE SOURCE	COLLECTED	RECEIVED					
	AL-37	Lab Blank	7/10/85	7/11/85					
	AL-38	Field Blank	7/10/85	7/1.1/85					
	AL-39	MV-1 ·	7/10/85	7/11/85					
1	AL-40	MW-2	7/10/85	7/11/85					
	AL-41	MW-3	7/10/85	7/11/85					
1	AL-42	1117-4	7/10/85	7/11/85					
	AL-43	mv-5A	7/10/85	7/11/85					
-[AL-44	m-5B	7/10/85	7/11/85					
	<i>u</i> −45	1nv-6	7/10/85	7/11/85					
-[AL-46	1111-7	7/10/85	7/11/85					
	AL-47	A8-WM	7/10/85	7/11/85					
_[AL-48	11W-8B	7/10/85	7/11/85					
	AL-49	· 9–vn4 ·	7/10/85	7/11/85					
	AL-50	MV-10A	7/10/85	7/11/85					
1	AL-51	M-10B	7/10/85	7/11/85					
	AL-52	MN-11	7/10/85	[.] 7/11/85					
_	AL-53	hw-12A	7/10/85	7/11/85					
j	AL-54	NW-12B	7/10/85	7/11/85					
	AL-55 .	MW-13	7/10/85	7/11/85					
'	AL-56	MW-14	7/10/85	7/11/85					
	AL-57	NW-15	7/10/85	7/11/85					
,	AL-58	S-1	7/10/85	7/11/85					
	AL-59	S-2	7/10/85	7/11/85					
			•						

C .LECTED BY:

KOPPERS COMPANY, INC.

CHEMICAL & ALLIED PRODUCTS

DURA-WOOD ALEXANDRIA, LA

SUMMARY OF ANALYTICAL DATA

PARAMETER AL	37	· 38	ΜW-1 39	Mω-2 40	мы=3 41	MW-4 .
pH, Units	5.2	7.1	6.9	7.2	7.3	7.2
Conductivity, umhos/cm	<l< td=""><td>0</td><td>1500</td><td>1450</td><td>1200</td><td>1290</td></l<>	0	1500	1450	1200	1290
TOC	1.5	<1	6.9	2.4	2.6	61
Phenols	<0.005	<0.005	0.014	<0.005	<0.005	0.890
Pentachlorophenol	<0.001	<0.001	<0.001	<0.001	0.0023	
Naphthalene	<0.003	<0:003	<0.003	<0.003	<0.003	1.55
	·					,
					-	
	-					
	_	,		i		
•	_	-				
·				-	-	
	-	- 	-	-{	-	
<u></u>	-	-		-	-	
	_				-	
:						_
				-	_	
	~-					-
	_		_[-{	_	_
				_		_[
	_	-	<u> </u>	_		
L	1	1	1	•	1	1

OTE: Test results in mg/liter unless otherwise noted.

KOPPERS COMPANY, INC.

CHEMICAL & ALLIED PRODUCTS

DURA-WOOD ALEXANDRIA, LA

SUMMARY OF ANALYTICAL DATA

PARAMETER AL	1-14-5H 43	MW - 5B 44	ми-4 45	11W-7	148-84 47	NW·82 48					
pH, Units	7.1	7.1	7.1	7.1	6.8	7.0					
Conductivity, umhos/cm	1480	2200	1480	1120	1280	2190					
ТОС	15	3.5	83	104	198	1250					
Phenols	. 0.688	<0.005	1.5	5.4	14	427					
- Pentachlorophenol	0.016	0.0012	0.0022	0.011	0.066	0.32					
Naphthalene	<0.003	<0.003	0.28	1.1	0.46	5.85					
: •											
	-										
				-							
				-							
<u></u>				-		-					
1	-	-	-	-	_	-					
	-	- 	-	-		-					
			-		-	-					
		-				-					
											
			-	-	-	_					
		-			_						
				-	_						
J		1]	1	1	1					

NOTE: Test results in mg/liter unless otherwise noted.

KOPPERS COMPANY, INC.

CHEMICAL & ALLIED PRODUCTS

DURA-WOOD ALEXANDRIA, LA

SUMMARY OF ANALYTICAL DATA

						
PARAMETER AL	MW - 9 49	MW-10H 50	MW-108 51	110-11 52	MW-12A 53	MW-12B .
oH, units	6.8	6.7	6.9	6.9	6.9	6.8
Conductivity, umhos/cm	1000	1120	2040	1110	1020	2300
Toc	116	2.1	2.9	6.9	2.4	3.9
Phenols	2.0	0.013.	0.015	0.012	<0.005	<0.005
Pentachlorophenol	0.0038	0.0040	0.0024	<0.001	<0.001	<0.001
Naphthalene	0.15	<0.003	<0.003	<0.003	<0.003	<0.003
			·			
<i>-</i> ∴						
;						
_						
•		·				
•						
•						_
		-				-
-		_		-		-
1	-			-		-
• -	-		-		 	
	_	-	-	-		_
			_			_
	_	_				_
				_L		

NOTE: Test results in mg/liter unless otherwise noted.

KOPPERS COMPANY, INC.

CHEMICAL & ALLIED PRODUCTS

DURA-WOOD ALEXANDRIA, LA

SUMMARY OF ANALYTICAL DATA

PARAMETER	MW-13	MD-14	MW-15	5-1	5-2	
AL	55	56	57	58	59	
H, Units	6.9	6.8	6.7	7.5	7.1	
Conductivity, umhos/cm	1480	1150	1400	480	370	
ОС	2.5	3.6	3.2	58	37	
Phenols	<0.005	<0.005	<0.005	0.017	0.094	
_entachlorophenol	<0.001	<0.001	<0.001	0.003	0.00€	
naphthalene	<0.003	<0.003	<0.003	<0.003	<0.003	
]			
	\					
			· ·	 		
			1			
		 		 	-	
		 	-	- 		
		<u> </u>	- 	-	-	
			-	-	-	
•				-	<u>'</u>	
•		<u> </u>				
		<u> </u>				
,						
						1
				-\	-	
		 			-	1
· ·		L	!			

nOTE: Test results in mg/liter unless otherwise noted.

KOPPERS

Interoffice Correspondence

To	K. H. Stroebel	From R. D. Hepner
Location_	Monroeville	Location Monroeville
Subject _	Dura-Wood, Alexandria, LA	Date November 1, 1985

Attached are results of analyses on samples AL-64 through 92 collected August 21, 1985, at Dura-Wood, Alexandria, Louisiana.

R. D. Hepner

RDH/rc

Attachments

cc: S. M. Tymiak

J. A. Quagliotti, Jr.

TABLE 1 . KOPPERS COMPANY, INC.

CHEMICAL & ALLIED PRODUCTS

DURA-WOOD

ALEXANDRIA, LA

SAMPLE COLLECTION DATA

LAB		DA	TE
Sample no.	SAMPLE SOURCE	COLLECTED	RECEIVED
AL-64	MW- 1	8/21/85	8/23/85
AL-65	MW-2	8/21/85	8/23/85
AL-66	MW-3	8/21/85	8/23/85
AL-67	MW-4	8/21/85	8/23/85
AL-68	MW-5A	8/21/85	8/23/85
AL-69	MW-5B	8/21/85	8/23/85
AL-70	MW-6	8/21/85	8/23/85
AL-71	MW-7	8/21/85	8/23/85
AL-72	MW-8A	8/21/85	8/23/85
AL-73	MW-8B ·	8/21/85	8/23/85
AL-74	MW-9	8/21/85	8/23/85
AL-75	MW-10A	8/21/85	8/23/85
AL-76	MW-10B :	. 8/21/85	8/23/85
AL-77	· MW-11	8/21/85	8/23/85
AL-78	MW-12A	8/21/85	8/23/85
AL-79	MW-12B	8/21/85	. 8/23/85
AL-80	MW-13	8/21/85	8/23/85
AL-81	MW-14	8/21/85	8/23/85
AL-82	MW-15	8/21/85	8/23/85
AL-83	MW-16 (field blank)	8/21/85	8/23/85
AL-84	S-1	8/21/85	8/23/85
AL-85	S-2	8/21/85	8/23/85
AL-86	S-3	8/21/85	8/23/85
AL-87	S-4	8/21/85	8/23/85

LECTED BY:

CHEMICAL & ALLIED PRODUCTS

DURA-WOOD

ALEXANDRIA, LA

SAMPLE COLLECTION DATA

LAB		DA	DATE				
	Sample no.	SAMPLE SOURCE	COLLECTED	RECEIVED			
	AL-88	S5 (field blank)	8/21/85	8/23/85			
	AL-89	SR-1 (soil)	8/21/85	8/23/85			
.	AL-90	SR-2 (soil)	8/21/85	8/23/85			
	AL-91	SR-3 (soil)	8/21/85	8/23/85			
-	AL-92	lab blank	8/21/85	8/23/85			
•	·						
			· ·				
•	,						
-							
_							
-							
_							
:							
_							
	1						

TLLECTED BY:

KOPPERS COMPANY, INC.

CHEMICAL & ALLIED PRODUCTS

DURA-HOOD

ALEXANDRIA, LA

SUMMARY OF ANALYTICAL DATA

			PARAM	BETERS		
LAB SAMPLE NO.	ТОС	Phenol	pll, units	Conductivity µmhos/cm	Pentachloro- phenol	Naplithalene
AL-64 '	X	X	X	χ.	χ.	X
AL-65 2	x	χ .	X	· x	X	x
AI,-66 3	x	x	x	x	X	X
A167 4	хх	x	x	X	x	<u> </u>
AL-68 34	X	χ	χ	X	χχ	X
AL-69 5B	X	Х	· X	X	X	X
AL-70 6	X	X .	x	х	x	X
AL-71 7	Х	X	X	X	Х -	. X.
AL-72 8#	155	7.6	6.7	1200	0.012	<u> </u>
AL-73 1.B	1547	310	7.0	2230	0.099	X
AL-74 9	<u> </u>	χχ	χ	Х	X	<u> </u>
AL-75 10A	3.9	0.075	5.9	1225 ·	<0.0001	X
AL-76 ICE	4.0	0.014	6.9	2200	0.0001	X
AL-77 "	6.8	0.027	6.9	1180	0.0001	<u> </u>
AL-78 12A	2.0	0.008	6.9	1100	0.0001	Х
AL-79 12B	4.4	0.005	6.9	2500	<0.0001	Х.
AL-80 12	2.5	0.007	7.0	1600	0.0001	X
AL-81 14	3.9	0.006	7.0	1225	0.0002	X
AL-82 15	138	<0.005	6.9	1500	0.0001	<u> </u>
AL-83 FE	1.6	<0.005	7.8	10	<0.0001	0.010 .
AL-84 5-1	108	0.333	7.1	700	0.0003	1.95
AL-85 3-2	44	0.288	7.6	480	0.0025	0.270
AL-86 5-3	95	0.232	6,8	1200	0.0002	<0.0001
AL-87 5.4	103	0,264	7.2	455	0.012	<0.0001

NOTE: Test results in mg/liter unless otherwise noted.

ENVIRONMENTAL RESOURCES DEPARTMENT ENVIRONMENTAL ANALYSIS LABORATORY MONROEVILLE SCIENCE & TECHNOLOGY CENTEF C-58

KOPPERS COMPANY, INC.

CHEMICAL & ALLIED PRODUCTS

DURA-WOOD

ALEXANDRIA, LA

SUMMARY OF ANALYTICAL DATA

	PARAMETERS								
Lab sample no.	TOC	Phenol	pli, units	Conductivity µmhos/cm	Pentachloro- phenol	Naphthalen			
AL-88 FB	1.9	<0.005	6.6	0	<0.0001	<0.0001			
AL-89*	Х	48	X	X	<0.025				
AL-90*	X	84	X	X	<0.025	-			
AL-91*	Χ	7.8	X	X	<0.025	•			
AL-92	<1	<0.005	5.8	<1<1	<0.0001				
			·						
•			·						
					_				
·									
· · · · · · · · · · · · · · · · · · ·									

NOTE: Test results in mg/liter unless otherwise noted.

*results in mg/kg

ENVIRONMENTAL RESOURCES DEPARTMENT ENVIRONMENTAL ANALYSIS LABORATORY MONROEVILLE SCIENCE & TECHNOLOGY CENTER

KOPPERS COM" "Y, INC. ALEXANDL..., LA

•	MW.1	2	Ξ .	4	54	533	٤	
Sample No. Al No.	A1-64 143164	A1-65 143165	143166		A1-68 143168	143169	A1-70 143170	
L.C. Analysis	9/19/85	9/19/85	•	9/30/85	9/30/85	9/24/85	9/30/85	
Components:			Microgr	ams/Liter	Water	•		
Naphthalene	<0.1	<0.1	<0.1	3400	16,400	<0.1	4500	•
Acenaphthylene	<0.1	<0.1	2.0	25	180	1.8	28	
Acenaphthene	5.4	0.38	180.	360.	480	150	480	٠
Fluorene	1.5	0.12	110	190	290	39	230	
Phenanthrene	0.53	0.060	64	250	380	4.3	230	
Anthracene	0.17	<0.05	12	25	50	0.93	22	
Fluoranthene	3•0 .	0.47	35	36 .	100	1.9	25	
Pyrene	1.9	0.22	14 ·	16 ·	56 '	1.1	14	
Benz (a) anthracene	0.16	0.035	0.48	0.70	15	0.064	0.48	
Chrysene	0.21	0.054	0.47	0.62	5.6	0.064	0.53	
Benzo(b)fluoranthene	0.051	< 0.02	0.070	0.047	5.5	<0.02	0.062)
Benzo(k)fluoranthene	0.029		0.041	0.047	3.7	•	0.041	
Benzo(a)pyrene	0.021		0.047	0.065	5.3		0.063	
Dibenz(a,h)anthracene	<0.02		<0.02	<0.02	0.6	8	<0.02	
Benzo(g,h,i)perylene	<0.02		<0.02	<0.02	2.8		<0.02	
Indeno(1,2,3-c,d)pyrene	<0.02	↓	<0.02	<0.02	2.9	J	<0.02	

•					
	12 A	123	12	14	/5
Sample No.	A1-78	A1-79	A1-80	A1-81	A1-82
Al No.	143475	143476 .	143477	143478	143479
L.C. Analysis	9/23/85	9/23/85	9/23/85	9/23/85	9/23/85
Components:		Micro	grams/Liter !	Water	• •
Naphthalene	<0.1	2.9	<0.1	<0.1	<0.1
Acenaphthylene	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	<0.1	0.30	<0.1	0.39	<0.1
Fluorene	<0.05	0.26	<0.05	<0.05	0.050
Phenanthrene	1.	0.70	1	0.10	<0.05
Anthracene		0.11		<0.05	<0.05
Fluoranthene		0-27		0.21	0.29
Pyrene	4	0.15	4	0.090	0.21
Benz (a) anthracene	<0.02	<0.02	<0.02	<0.02	.<0.02
Chrysene					0.044
Benzo(b) fluoranthene	, , ,		İ		<0.02
Benzo(k)fluoranthene				[. 1
Benzo (a) pyrene	1			į	
Dibenz(a,h)anthracene				1	·
Benzo(q,h,i)perylene				1,	1.

Indeno(1,2,3-c,d)pyrene

KOPPERS COMPANY, INC. ALEXANDI., LA

•	7	BA	83	· 9	16 A	102	11
Sample No.	A1-71	A1-72	Al-73	A1-74	A1-75	A1-76	
Al No. L.C. Analysis .	. 143171 9/30/85	143172 9/30/85	143345 9/30/85	143346 9/30/85	143347 9/23/85	143348 9/23/85	
Components:	3, 30, 03	2730703		ams/Liter			3721703
Naphthalene	6,540	15,900	15,600	12,800	0.46	0.27	2.7
Acenaphthylene	38	76 ·	110	79	<0.1	<0.1	19
Acenaphthene	360	360.	420	380	<0.1	0.41	360
Fluorene	. 170	· 180	230	220	<0.05	0.32	100
Phenanthrene	160 .	260	320	250		0.61	26 ·
Anthracene	11	34 ·	49	22		0.060	3.8
Fluoranthene	16 ·	33	64	24		0.19	11
Pyrene	7.1	17	38 .	7.4	1	0.13	5.1
Benz (a) anthracene	0.42	1.4	8.6	0.69	9 <0.02	0.022	0.15
Chrysene	0.41	1.2	7.6	0.4	5 0.062	0.053	0.20
Benzo(b)fluoranthene	0.06	0.46	2.8	0.10	0.030	0.026	0.034
Benzo(k)fluoranthene	0.03	0.31	2.0	0.0	55<0.02	<0.02	<0.02
Benzo (a) pyrene	0.07	73 0.56	. 2.4	0.09	. 8	1	0.023
Dibenz(a,h)anthracene	<0.02	0.03	8 0.26	0.02	24		<0.02
Benzo(g,h,i)perylene	0.03	4 0.21	2.1	0.09	2		<0.02
Indeno(1.2.3-c.d)pyrene	0.04	3 0.21	1.9	0.04	16.4	4	<0.02

KOPPERS

Interoffice Correspondence

Го	K. H. Stroebel	From R. D. Hepner
Location_	Monroeville	Location Monroeville
Subject_	Dura-Wood, Alexandria, LA	Date November 1, 1985

Attached are results of analyses on samples AL-93 through 106 collected September 3, 1985, at Dura-Wood, Alexandria, Louisiana.

R. D. Hepner

RDH/rc

Attachment

cc: S. M. Tymiak

J. A. Quagliotti, Jr.

KOPPERS

Interoffice Correspondence

То	K. H. Stroebel	From	R. D. Hepner
Location_	Monroeville	Location_	Monroeville
Subject	Dura-Wood, Alexandria, LA (821-3508)	Date	November 8, 1985

Attached are results of analyses on samples AL-107 through 123 collected September 19, 1985, at Dura-Wood, Alexandria, Louisiana.

R. D. Hepner

RDH/rc

Attachment

cc: S. M. Tymiak
J. A. Quagliotti, Jr.

TABLE 1

KOPPERS COMPANY, INC. CHEMICAL & ALLIED PRODUCTS DURA-WOOD ALEXANDRIA, LA

SAMPLE COLLECTION DATA

LAB		DA	DATE			
SAMPLE NO.	SAMPLE SOURCE	COLLECTED	RECEIVED			
AL-107	AL-107 MW-8A .		9/23/85			
AL-108	MW-8B	9/19/85	9/23/85			
AL-109	MW-10A	9/19/85	9/23/85			
AL-110	MW-10B	9/19/85	9/23/85			
AL-111	MW-11	9/19/85	9/23/85			
AL-112	MW-12A	9/19/85	9/23/85			
AL-113	MW-12B	9/19/85	9/23/85			
AL-114	MW-13	9/19/85	9/23/85			
AL-115	MW-14	9/19/85	9/23/85			
AL-116	MW-15	9/19/85	9/23/85			
AL-117	MW-S1	9/19/85	9/23/85			
AL-118	MW-S2	9/19/85	9/23/85			
AL-119	MW-S3	9/19/85	9/23/85			
AL-120	MW-54	9/19/85	9/23/85			
AL-121	Field Blank	9/19/85	9/23/85			
AL-122 . ·	S Field Blank	9/19/85	9/23/85			
AL-123	Lab Blank	9/16/85	9/23/8			
·		·				

COLLECTED BY:

KOPPERS COMPANY, INC.

CHEMICAL & ALLIED PRODUCTS

DURA-HOOD

ALEXANDRIA, LA

SUMMARY OF ANALYTICAL DATA

	t A	53	104	103) \	12 A
PARAMETER	AL-107	AL-108	AL-109	AL-110	AL-111	AL-112
, units	7.1	7.4	7.3	7.5	7.4	7.4
3	175	1605	2.2	4.1	7.2	3.1
D (5 day) - Total				·		
- Soluble						
DD - Total						
- Soluble						
enols	6.02	248	<0.005	<0.005	<0.005	<0.005
dity (as CaCO3)						
co pH = 4.5 M.O.						
to pH = 8.3 PHT	 	••		•		:
Lalinity (as CaCO3)			1			
to pH = 4.5 M.O.						
্রাds, Evaporated			i.	:		
Total -103°C						
Fixed - 550°C						
Yolatile - 550°C						
o <u>li</u> ds, Suspended	}		•			
Total -103°C			·			
Pixed - 550°C			·			
Volatile - 550°C				•		
olids, Dissolved						
Total - 103°C						
Fixed - 550°C						
Volatile - 550°C						
			•			
				1		

			•								
		COPPERS COMP	ANY, INC.								
	CHE	MICAL & ALL	IED PRODUCTS	· · · · · · · · · · · · · · · ·							
-		DURA-W	00D								
		ALEXANDRIA, LA									
-	SUMM	SUMMARY OF ANALYTICAL DATA									
·	22	13	14	15	5 (25					
PARAMETER	. AL-113	AL-114	AL-115	ΛL-116	AL-117	AL-118					
nits	7.3	7.4	7.3°	7.4	7.2	7.6.					
	5.2	2.2	3.8	3.7	30	37					
) (5 day) - Total											
- Soluble					•						
D Total	<u>.</u>					·					
- Soluble											
nois	<0.005	<0.005	<0.005	<0.005	0.028	0.018					
(as CaCO ₃)				•							
to pH = 4.5 M.O.											
to pH = 8.3 PHT		·									
alinity (as CaCO3)			•			1					
to pH = 8.3 PHT											
to pH = 4.5 M.O.											
;, Evaporated]		<u> </u>							
Total -103°C											
Pixed - 550°C											
Volatile - 550°C						:					
, Suspended					1:						
Total - 103°C											
Fixed - 550°C			<u> </u>								
Volatile - 550°C											
in, Dissolved		1]	:					
Total - 103°C				<u></u>							
Fixed - 550°C											
Volatile - 550°C											
-		,	1	}							

C-67

KOPPERS COMPANY, INC. CHEMICAL & ALLIED PRODUCTS DURA-HOOD ALEXANDRIA, LA

SUMMARY OF ANALYTICAL DATA

53 44 PARAMETER AL-119 AL-120 **AL-121** AL-122 AL-123 7.5 7.2 7.4 6.2 5.5 _units 1.7 51 74 <1 <1 D (5 day) - Total - Soluble DD - Total - Soluble 0.027 0.102 <0.005 <0.005 <0.005 enols 3' (as CaCO₃) to pH = 4.5 M.O.to pH = 8.3 PHT kalinity (as CaCO₃) to pH = 8.3 PHTto pH = 4.5 M.O.is, Evaporated Total - 103°C Fixed - 550°C Volatile - 550°C uds, Suspended Total -103°C Pixed. - 550°C Volatile - 550°C lids, Dissolved Total - 103°C ixed - 550°C Volatile - 550°C

C-68

KOPPERS COMPANY, INC. CHEMICAL & ALLIED PRODUCTS DURA-WOOD ALEXANDRIA, LA

SUMMARY OF ANALYTICAL DATA

	54	sō	10 A	109	11	12,1
PARAMETER	AL-107	AL-108	AL-109	AL-110	AL-111	ΛL-112
mmonia (NH3) N <u>- Total</u>			·			
- Free						
- Pixed						!
Kjeldahl N		···				. !
itrate N						
Nitrite N						
Jernhorus, Total P						
Phosphorus, Ortho P						
1 & Grease	••		·			•
yanide - Total CN			•			
- Pree CN	·			,		
- Amenable CN						
ntachlorophenol (PCP)	0.026	0.055	0.0021	0.0025	0.0022	0.0012
iiocyanates (SCN)						
Calor, units						
inductivity, µmhos/cm	1200	2225	1125	2100	1150 ·	1100
Durbidity, units			•			
Naphthalene :	0.025	9.2	<0.003	<0.003	<0.003	<0.003
			·			
		1		٠.	1	
						1
				•		
					1	
						والمراجعة والمراجعة والمراجعة والمراجعة

	_	
	KOPPERS COMPANY, INC.	
	CHEMICAL & ALLIED PRODUCTS	
•	DURA-WOOD	
	ALEXANDRIA, LA	

SUMMARY OF ANALYTICAL DATA

	17B	124 B	ادا سيند	W15	مبجر	
PARAMETER	AL-113	AL-114	AL-115	AL-116	AL-117	AL-118
mmonia (NH3) N - Total						
- Pree						
Fixed						
ieldahl N		· .				
litrate H						
trite N						
?hosphorus, Total P						
horus, Ortho P						
그립 & Grease	<u>· </u>					
/anide - Total CN						
- Free CN						
- Amenable CN						
Pentachlorophenol (PCP)	0.0015	0.0015	0.002	0.0016	0.002	0.0023
1 iocyanates (SCN)						,
Color, units						
nductivity, µmhos/cm	2500	1550	1200	1500	330	380
Purbidity, units						
-						
Naphthalene	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
			•			
				· ·	-	:
		1.				
والمساورة والمساورة والمساومة والمناورة والمساورة والمساورة والمساورة والمساورة والمساورة والمساورة						بريو ومسوده ، حميلي بر

OTE: Test results in mg/liter unless otherwise noted.

C-70

TABLE 3 KOPPERS COMPANY, INC. CHEMICAL & ALLIED PRODUCTS DURA-WOOD ALEXANDRIA, LA

SUMMARY OF ANALYTICAL DATA

PARAMETER	AL-119	AL-120	AL-121	AL-122	AL-123	AL-124
-monia (NII3) N - Total						
- Free						
- Fixed						
ldahl N						
trate N						
rite N						
hosphorus, Total P						
orus, Ortho P						
il & Grease			·			
ınide – Total CN						
- Pree CN						
- Amenable CN						
entachlorophenol (PCP)	0.0055	0.0058	0.0014	0.0025	0.0018	
cyanates (SCN)						
olor, units						
iductivity, jimhos/cm	900	300	9	. 5	<1 :	
urbidity, units			·			
aphthalene	<0.003	<0.003	<0.003	<0.003	<0.003	
			1			
-			1	:		
•		 	 			
		1				

TE: Test results in mg/liter unless otherwise noted.

LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY GROUND WATER PROTECTION DIVISION

GROUND WATER MONITORING DATA REPORT FORM

Covering the period from: 1-87

to: 12-87

ompany Name:

Dura-Wood Treating Company, Inc.

EPA Id. No.: LAD069524981

ailing Address: P

P.O. Box 231 Pineville, LA 71360

Phone No.: (318) 442-2467

ontact: Clyde M. Norton

Title: Vice President

Phone No. 344

aboratory: Ball Engineering, Inc.

Address: P.O. Box JB_Tuscaloosa, AL.35486

Analytical methods used are from "Test Methods

For Evaluating Solid Wastes EPA No. SW-846

2nd Edition, July 1982"

nalytical Methods:

Metals:

Pesticides:

Volitile Organics:

. Base/Neutral Extractable:

Acid Extractable:

Other: (K001)

ပ္ပ

rtification.

with the submitted in this and all attached documents, and that based on my inquiry of those immediately responsible for obtaining the information, I believe that the submitted that there are significant penalties examined and am familiar bmitting false information, including the possibility of fine or imprisonment. I certify under penalty of law that I have personally formation submitted in this and all attached documents, and formation is true, accurate and complete. I am aware dividuals

" futh Title: I'm Rus

gnature:

Date: 2/21/

WELL INFORMATION

Parameters \ Well number	INEW	10A	12A	13	6		
Latitude	31° 20'00"	31°20'00"	31°20'00"	31°20'00"	31°20'00"		
Longitude	92°25'30"	92°25'30"	92°25'30"	92°25'30"	92°25'30"		
Type	DETECTION	DETECTION	DETECTION	DETECTION	RECOVERY		
Unit monitored Up or down gradient	SURFICIAL AQUIFER UP	SURFICIAL AQUIFER DOWN	SURFICIAL AQUIFER DOWN	SURFICIAL AQUIFER DOWN	SURFICIAL AQUIFER DOWN		
Monitored zone thickness	10.0'	13.01	16.0*	10.0'	10.0		
Construction	2" PVC	2" PVC	2" PVC	2" PVC	2"PVC		
Sampling method	DBAL	DBAL	DBAL'	DBAL	PUMP		
Casing elevation	75.2'	74.9	73.3'	72.8	NA		
Well depth	20.5'	18.7'	19.5'	20.1	17.5'	}	
Screen interval, From To	10-20'	9-19'	9-19'	10-20'	7.5-17.5		
Elevation of water (MSL)	69.78'	DRY	59.10'	58.36'	NA .		
Gallons purged	1		<1	<1	6		
Date sampled	11-12-87	11-12-87	11-12-87	11-12-87	11-12-87		

2-73

				-			
Parameters \ Well number (ug/1)	1NEW	10A	12A	13	6		
Site Specific or Other K001-App. 7 2-Chlorophenol Phenol 2,4-Dimethylphenol 2,4,6-Trichlorophenol p-Chloro-m-cresol Tetrachlorophenol 2,4,-Dinitrophenol Pentachlorophenol Naphthalene Acenaphthene Phenanthrene + Anthracene Fluoranthene Pyrene + Benzo(a) anthracene Chrysene Benzo(b,K)fluoranthene Benzo(a)pyrene Indeno(1,2,3-cd)pyrene + Dibenzo(a,h)anthracene Carbazole	<10ug/1 <10 <10 <10 <10 <10 <10 <10 <10 <10 <1	DRY	<10ug/1 <10 <10 <10 <10 <10 <10 <10 <10 <10 <1	<10ug/1 <10 <10 <10 <10 <10 <10 <10 <10 <10 310 615 3340 3020 5250 9070 4800 <10 <10 2190	1820ug/1 1870 8550 4070 <10 <10 1870 1590 3160 1280 1110 1420 178 <10 <10 <10		

C-74

SUMMARY OF (ALL QUANITTIES IN g/litre) MONITORING WELL SAMPLING ANALYSIS

<u>Parameters</u>	Date Samples	** <u>MV-1</u>	<u>MW-6</u>	<u>MW-10A</u>	<u>MA-12A</u>	<u>IW-13</u>
Phenol	11/12/87 * 9/19/85 8/21/85 7/10/85	< 10 — — 14	1870 — — 1500	< 5 75 13	< 10 < 5 8 < 5	< 10 < 5 7 < 5
Naphthalene	11/12/87 * 9/19/85 8/21/85 7/10/85	< 10 < .1 < 3	1590 4500 —— 280	.46 < 3	< 10 .1 	21 .1 < 3
PAH:						
Anthracene Phenanthren		< 10 .7	1280 252	< .1	< 10 < .1	3340 < .1
Acenapthene	11/12/87 * 9/30/85	< 10 5.4	3160 480	< .1	< 10 < .1	615 < .1
Fluoranthen	e 11/12/87 * 9/30/85	< 10 3	1110 25	 < .05	< 10 < .05	3020 < .05

^{*} Post-Closure Sampling

Note: According to the Post Closure Plan submitted by Durawood, a specific well shall be considered hazardous if any K001 constituent has a concentration greater than the detection limit. The detection limit for the following compounds in micrograms per litre are: phenol - 10, napthalene - 10, anthracene + phenanthrene - 10, acenapthene - 10, fluoranthene - 10.

^{**} MW-1 may be considered to be the background well.

VASTEVATER DISCHARGE SAMPLING RESULTS



market to e:4

TO: Durawood Treating Company

P.O. Box 4600

Pineville, LA 71361-4600 Attn: Mr. Clyde M. Norton DATE OF REPORT: 4/28/88 DATE OF SAMPLE: 3/22/88

REPORT OF ANALYSES

SAMPLE LOCATION: Process Water Discharge to City after Pretreatment

PURPOSE OF SAMPLE: 1st Quarter Analysis

DATE SAMPLE RECEIVED AT LAB: 3/22/88

PERSON RECEIVING SAMPLE: George Williams

PARAMETER	RESULT				
Average Discharge	9,900 Gallons per da				
Oil and Grease	47 mg/L				
Arsenic	< 2				
Chromium	< 0.007				
Copper	< 0.05				

TEST METHODS: EPA 40 CFR Part 136

Mailed 10 C:47 1122188

TO: Durawood Treating Company

P.O. Box 4600

Pineville, LA 71361-4600 Attn: Mr. Clyde M. Norton DATE OF REPORT: 1/21/88
DATE OF SAMPLE: 12/21/87

REPORT OF ANALYSES

SAMPLE LOCATION: Process Water Discharge to City after Pretreatment

PURPOSE OF SAMPLE: 4th Quarter Analysis

DATE SAMPLE RECEIVED AT LAB: 12/31/87

PERSON RECEIVING SAMPLE: G. Williams

TEST METHODS: EPA 40 CFR Part 136

Sample No.

PARAMETER	RESULT
Average Discharge	9,900 gal/day
Oil and Grease	45 mg/L
Arsenic	0.03 mg/L
Chromium	<0.05 mg/L
Copper	<0.05 mg/L
_	

87-1010 & 88-006

TO: Durawood Treating Company

P.O. Box 4600

Pineville, LA 71361-4600 Attn: Mr. Clyde M. Norton DATE OF REPORT: 10/28/87
DATE OF SAMPLE: 7/6/87

REPORT OF ANALYSES

SAMPLE LOCATION: Process Water Discharge to City after Pretreatment

PURPOSE OF SAMPLE: 3rd Quarter Analysis

DATE SAMPLE RECEIVED AT LAB: 7/7/87

PERSON RECEIVING SAMPLE: G. Williams

PARAMETER	RESULT				
Average Discharge	9,900 gal/day				
011 and Grease	57 mg/L				
Arsenic	< 0.01 mg/L				
Chromium	< 0.05 mg/L				
Copper	< 0.05 mg/L				

TEST METHODS: EPA 40 CFR Part 136



model L CX

Durawood Treating Company P.O.Box 4600

Pineville, LA 71361-4600 Attn: Mr. Clyde M. Norton Date of Sample: 4/20/87 Date of Report: 6/30/87

REPORT OF WATER ANALYSIS

SAMPLE LOCATION: Second Quarter Process Water Discharge to City

PARAMETER	CONCENTRATION (mg/1)
Oil & Grease	19
Arsenic	<0.01
Chromium	<0.05
Copper	<0.05

METHODS: EPA 40 CFR Part 136

Average Discharge: 9900 gal/day



moies t ch

Durawood Treating Company

P.U. Box 4600

Pineville, LA 71361-4600 Attn: Mr. Clyde M. Norton Date of Sample: 3/30/87 Date of Report: 6/30/87

REPORT OF WATER ANALYSIS

SAMPLE LOCATION: First Quarter Process Water Discharge to City

PARAMETER	CONCENTRATION (mg/1)
Oil & Grease	30
Arsenic	<0.01
Chromium	<0.05
Copper	<0.05

METHODS: EPA 40 CFR Part 136

Average Discharge: 9900 gal/day



Mr. Clyde Norton Durawood Treating Company P. O. Box 1926 Alexandria, LA 71301 Report Date: 1/10/87

REPORT OF ANALYSIS

LOCATION: Process Water Effluent to City of Alexandria Sewage Trestment Plant

		Concentration in mg/L					
Sample No.	Sample Date	011 & Grease	Arsenic	Chromium	Copper		
86-728	12/10/86	69	<0.01	0.11	0-30		
86-729	12/11/86	39	<0.01	0.09	0.22		

METHODS: "Standard Methods, 16th Ed."

JA Dall John Ball, Ph.D, PE